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OS/2 MAGAZINE

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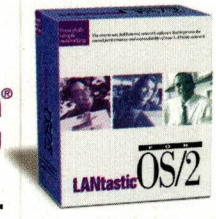

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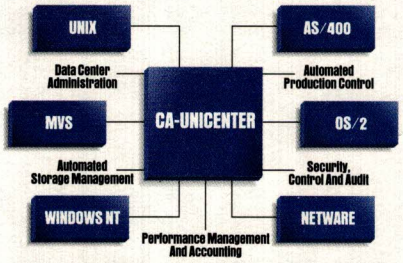

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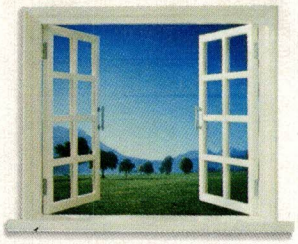

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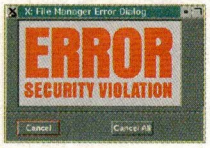

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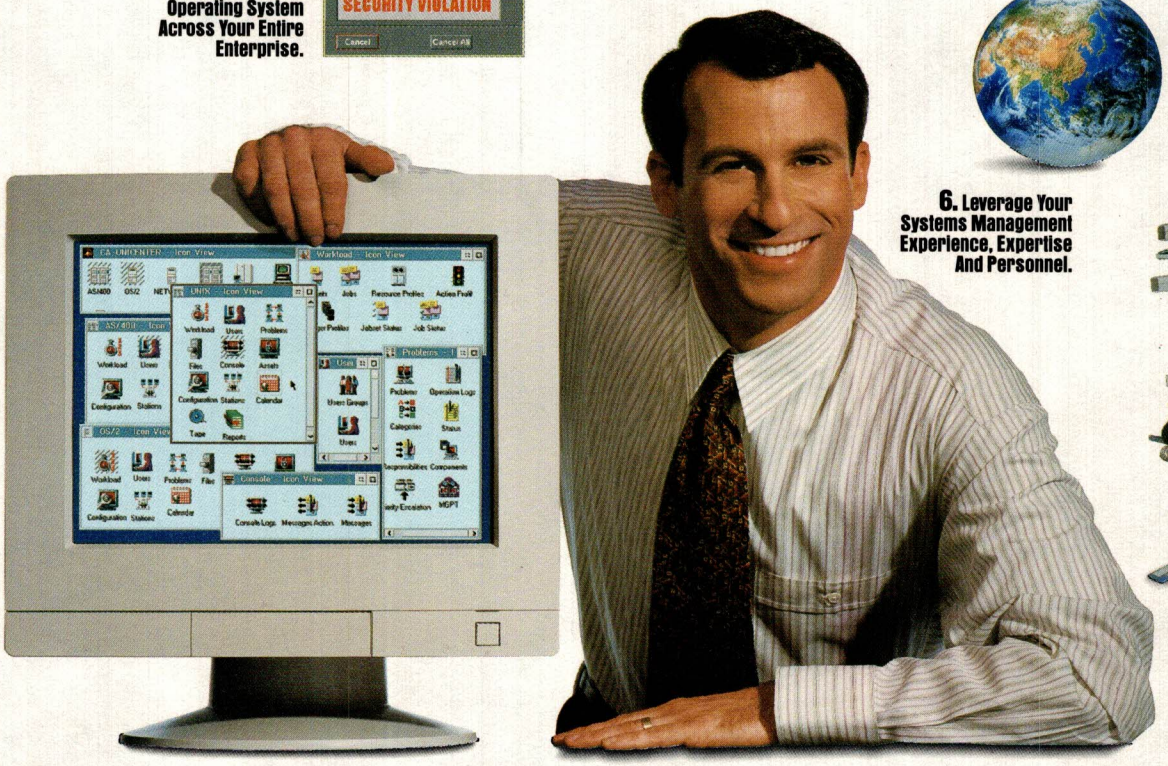

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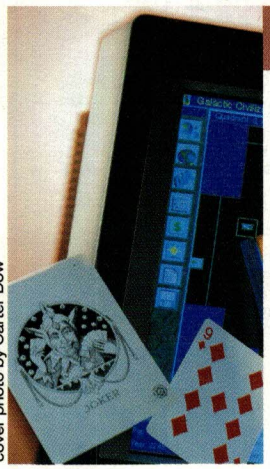

cover photo by Carter Dow

Cover Story

28 Player's Choice

For years now, MMPM/2 has given OS/2 the technological base to become the ultimate PC game-player's platform. However, with the small number of non-corporate OS/2 sales, game developers failed to port their products to OS/2, never mind develop unique OS/2 games. That's changing: At long last, commercial-quality native OS/2 games are beginning to appear. Here's a look at the best of the bunch, as well as a few good time-killers and shareware favorites. *By Alexander Antoniades*

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41 NetWare, Part Deux.11

One good upgrade deserves another: Shortly after the release of OS/2 Warp 3.0, Novell and IBM updated the NetWare Client for OS/2 to version 2.11. Let's take a close look at how NetWare Client 2.11 differs from its important predecessor, 2.01, covering installation, configuration, and functionality. *By Bob Panza*

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Send address changes to: *OS/2 Magazine*, Circulation Department, PO Box 56664, Boulder,CO 80323-6664. Telephone (800) 765-1291.

Postal and Rates
Second-class postage paid at San Francisco, CA, and additional mailing offices. *OS/2 Magazine* (ISSN #1073-1547) is published monthly by Miller Freeman Inc., 600 Harrison St., San Francisco, CA 94107.

Domestic subscription rate for one year is $39.95; two years, $64.95. Canada rates for one year are $49.95; two years, $74.95 (payable in U.S. funds). For all other countries, the rate for one year is $79.95 airmail (prepayment in U.S. funds). Single-copy price (U.S.) is $7.00 plus $2.00 postage; international, $10.00 including postage.

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BPA International Consumer Magazine membership applied for March 1995

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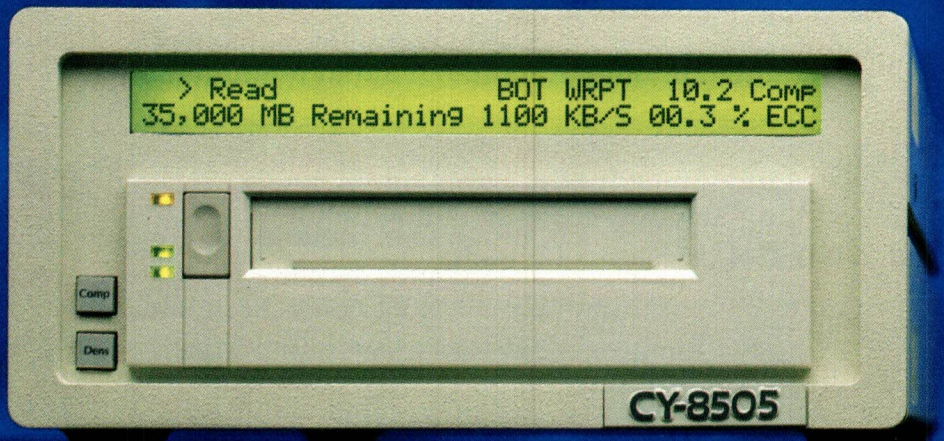

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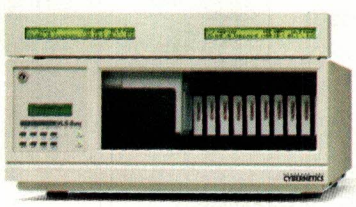

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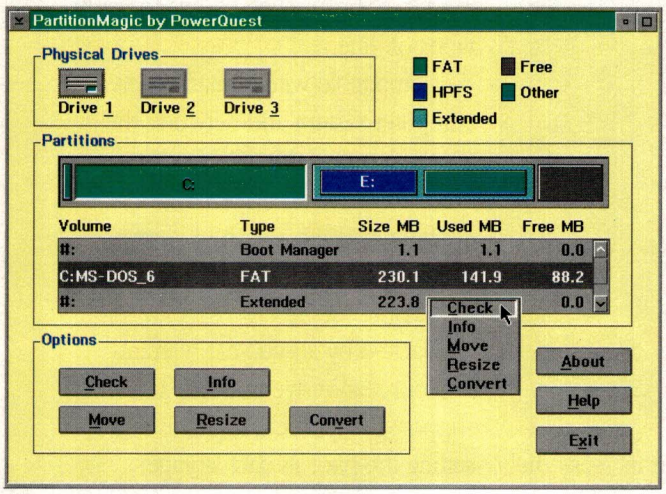

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Perspectives

Best Case, Worst Case

Thanks to IBM's broad media push—I've encountered TV ads, magazine ads, and even radio ads on San Francisco's KCBS ("All News, All Day, All Night")—consumer awareness of OS/2 Warp is higher than any previous version of OS/2. At the same time, Microsoft is taking a beating with Windows 95, with reports surfacing that it's still DOS under the covers, that it's still Windows 3.x under the covers, that it has driver problems, and let's not forget the continuing delays.

Combine those facts with the premise that OS/2 Warp "for Windows" was geared at attracting new OS/2 users (all migrating from Windows, says IBM), and news that OS/2 Warp topped several software best-seller lists in late 1994/early 1995, and you'd expect high sales figures.

If that's what you'd expect, you'd be right. On December 20, 1994, IBM's Personal Software Products (PSP) division claimed 800,000 copies of OS/2 Warp sold worldwide. On March 21, 1995, an IBM PC Company press release on IBM's World-Wide Web site (*http://www.ibm.com/News/ls950321.html*) claimed 1.8 million units sold.

Of course, in most other software categories, sales of 300,000+ units per month would be outstanding. Not so with operating systems: In July 1994, Microsoft officially claimed two million copies of Windows 3.x sold/preloaded each month—and off the record, some Microsoft execs now claim closer to three million copies per month. Maybe Microsoft is exaggerating the numbers. Maybe IBM is, too. No matter how you slice it, though, OS/2 Warp's consumer blitz is starting to look successful, especially considering the still-dismal preload situation.

Let's enjoy the rosy vision of OS/2's best-case future. Assume OS/2 Warp "full-pack" has a huge impact, with nearly all OS/2 2.x users upgrading, and millions more migrating from DOS, Windows, maybe even Macintosh. The release of OS/2 Warp Connect pushes OS/2 to new heights in the larger enterprise. OS/2 for PowerPC blows the socks off AIX and Windows NT. Further, Windows 95 is delayed past August (perhaps not shipping in volume until 1996, which would be a major disaster for Microsoft) and its initial releases are unstable, incompatible, perhaps even denied a *PC Magazine* Editors' Choice award. What then?

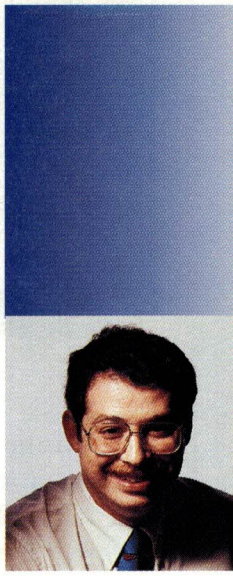
As OS/2 users triumph, Lee Reiswig, president of IBM PSP, enjoys a New York ticker-tape parade; Team OS/2 gets its own headquarters building in Armonk; David Barnes replaces Oprah Winfrey as the nation's best-known talk-show host; high schools teach REXX instead of BASIC; Borland buys Microsoft and renames it the "Turbo Applications Division"; Novell completes the port of WordPerfect 6.0 to OS/2; and *OS/2 Magazine* goes down in history as the most successful computer magazine ever.

Let's paint a more gloomy picture: What if Windows 95 appears this August, and *doesn't* choke? Since Microsoft is united behind Windows 95 (well, perhaps except for the Windows NT team), Bill Gates will throw the company's marketing and PR muscle behind the launch. Consumers and businesses will be inundated with constant messages giving myriad reasons why they should upgrade. And many will, perhaps by mid-1996.

They will choose Windows 95, that is, unless the *benefits* of running OS/2 Warp are clearly and compellingly presented to the mass market (and I don't mean the incomprehensible "The-new-32-bit-multitasking-multimedia-Internet-accessed-crash-protected-take-a-deep-breath-Windows-friendly-totally-cool-way-to-run-your-computer-OS/2-Warp"). A stable Windows 95 will be the default upgrade choice for the average DOS or Windows user. Microsoft will own the small-office and consumer desktop.

What might the OS/2 universe look like in such a post-Windows 95 worst-case apocalypse? Unlike many analysts, I *don't* predict OS/2's demise. IBM's strategy must include domestic-labeled operating systems for each of their hardware platforms, from mainframe (MVS) to AS/400 (OS/400), to RS/6000 (OS/2 and AIX), to desktop (OS/2 and PC DOS). Even if OS/2 loses money, IBM can't allow Microsoft to be the sole 32-bit operating-system provider for its personal-computer platform. You can see this in IBM's recent decision to release PC DOS 7.0, and in their reinventing the OS/2 Technical Interchange developer conference as the OS/2-AIX-OS/400-MVS Technical Interchange.

OS/2 for the PowerPC should be in a strong position. OS/2 for Intel and PowerPC share a common Applications Programming Interface (API) set, and porting OS/2 apps to PowerPC is relatively easy. Although Windows 95 (Intel) and Windows NT (Intel and PowerPC) also share an API set, the buzz in the software-development community is that many APIs are inconsistently implemented. Thus, porting Windows 95 apps off the Intel platform will be much harder. So, if PowerPC succeeds, IBM will own the future *corporate* desktop.



Back to the Intel platform: If Windows 95 delivers on its promises while Microsoft spends millions (billions?) on advertising, no PC manufacturer will remain OS/2-centric. The IBM PC Company will embrace Windows 95—they can't afford to ignore competitors' (Compaq, Dell, and others) efforts to position themselves as building superior Windows 95 platforms. OS/2 Warp, although still preloaded on some or all systems, won't prominently appear in IBM's consumer-oriented ads or mail-order catalogs.

That's not going to kill OS/2. Although OS/2 is indeed an excellent operating system for most PC users, its safe haven is the medium-to-large corporate environment. No matter how well Windows 95 does in the "Microsoft Home," OS/2 will continue to win at large sites, due to OpenDoc's distributed parts, cross-platform CICS and DB2, SMP and PowerPC versions, and other industrial-strength features Windows 95 users couldn't even imagine.

Alan Zeichick

Alan Zeichick
Editor-in-Chief

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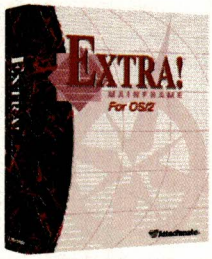

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Letters

The Lotus Position

Dear Editor:

In his column, "Lotus and Kaleida, Tales of Cross-Platform Problems and Solutions" (April 1995, p. 11), Alexander Antoniades accuses Lotus of "sitting back." He implies that we are intentionally delaying the release of our next-generation OS/2 applications for the sole reason that we want to ship Windows 95 first, which is decidedly not the case.

I would like to put back into context the fragment of the CompuServe conversation that Alexander quoted. In an earlier CompuServe posting that Alexander did not mention, I stated Lotus' OS/2 strategy: "to deliver functionally equivalent products for both OS/2 and Windows in our next-generation releases," which is what the vast majority of our OS/2 customers tell us they want. Because most of these customers work in mixed OS/2 and Windows environments, this request makes perfect sense.

To effect this strategy, Lotus has synchronized its OS/2 and Windows 95 development teams to deliver one shared code base for both platforms. It is not a case of favoring one platform over another, but of putting both on equal footing. The alternative of breaking up the development teams and delivering OS/2 earlier would lead to different platform versions and feature sets and a return to the situation that our customers want to put behind them.

Another point that I made in my earlier posting is that our next-generation applications are not yet ready to ship. We are not sitting on revised OS/2 applications, waiting for Windows 95. Our plans go well beyond delivering functional equivalency on OS/2 and Windows. We are also fundamentally redesigning our desktop applications to include new 32-bit code bases with an overall object architecture and a high level of shared components. Again, this work is being done in response to customers' demand for robust applications that exploit advanced operating system capabilities and a greater degree of integration between individual applications. All of this work is being done, for the most part, independent of OS/2 or Windows 95 considerations.

Our plan is ambitious and perhaps is taking longer than we would all like, but we remain committed to our course of action. As the only major vendor with native application suites for OS/2 and Windows, our commitment is to meeting the needs of customers who use either of these two platforms and especially of those on both.

Yuko Takagi
Product Manager, SmartSuite for OS/2
Lotus Development Corp.

Clearly, it's your call. We're not going to argue the benefits of cross-platform parity. However, the fact remains that your statements continue to imply that the OS/2 version of SmartSuite will be delayed to guarantee a simultaneous release with the Windows 95 version.
Alexander Antoniades

Number Nine GXE64 revisited

Dear Editor:

I wanted to point out an error in the article "OS/2 Warp Meets High Resolution Graphics" (April 1995, p. 28), regarding the Number Nine GXE64 Card that is listed in the sidebar on p. 34. Mr. Bailes states that the GXE64 uses the 64-bit S3 Vision 864 chipset when, in fact, the card might include the TRIO64 chipset. Apparently, two different versions of the card exist. You can tell the difference between the GXE64 and TRIO64 versions of the card by looking at the number on the biggest chip on the card. Or, use the Hawkeye utilities that came with the card. If the card has the TRIO64 chipset, you can obtain drivers from the Number Nine BBS at (617) 862-7502 (or +49 89 614 491 66 in Europe) or *ftp.dell.com*.

Rob Duarte

And now for something completely different

Dear Editor:

I read Alan Zeichick's "Perspectives" column in the March 1995 issue (p. 7) with considerable interest. I agree, for the most part, with his admonitions to his counterparts on other magazines. However, I don't believe his point of view reaches far enough. I have been running the Slackware version of Linux, the free UNIX clone, for several months. In fact, I obtained it when I got my copy of OS/2 Warp. Not only did it install flawlessly, but it comes with complete OS and application source code. On the other hand, neither I nor IBM can yet determine how to get OS/2 running on my old 386 from CD-ROM.

In addition, my current version of Linux is completely compatible with DOS. Not only can I transfer files back and forth, but it's possible to run DOS sessions under Linux, including support for a wide range of disk-compression systems, such as Stacker. The current OS/2 support is limited to file transfers and Boot Manager compatibility. I have full confidence that, if OS/2 continues to be successful, the Linux network will make full support available.

If Microsoft considers OS/2 compatibility, both IBM and Microsoft should consider compatibility with Linux and perhaps other systems. I am not a professional programmer, but I've worked with operating systems, ranging from the Altair to CP/M, TRS-DOS, DOS, and finally Linux. In my view, Linux, with its ever-expanding suite of applications and rock-solid performance, is far and away the current operating system of choice and no one will ever be able to compete on a price basis—it's free.

Stanley G. Student
Scottsdale, AZ

Perhaps you're right. You work on getting the Linux folks to support native 32-bit OS/2 applications, and I'll lobby IBM to include a Lin-OS/2 session in OS/2 Warp 3.1. Deal?
Alan Zeichick

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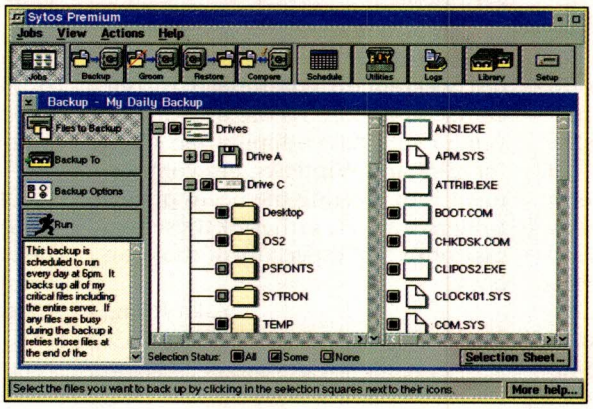

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OS/2 Warp, updated and bundled

FIXES AND OBJECTS AND BUNDLES, OH MY!

BY ALEXANDER ANTONIADES

FixPak available

The first update to the original "for Windows" version of OS/2 Warp has been released, called FixPak 005—or, you can refer to it with the more catchy title that IBM calls it, WFP_05. According to the *readme* file, this patch solves 52 problems present in the original OS/2 Warp.

The fix is available in two files, *wkicker.zip* (1,747,007 bytes, which creates the boot disks that are needed to install the fix) and *wfp_05.zip* (3,391,942 bytes, which contains the fix). The */pub/os2 /os2fixes* directory at IBM's *software.watson.ibm.com* ftp site is the best place to find these or any other OS/2 patches. FixPak 005 is also available at official IBM on-line support areas, for example, CompuServe's OS2SUPPORT forum, and the OS/2 BBS, (919) 517-0001.

When you get these files, unzip them to create five *.dsk* files. You can use IBM's **loaddskf** utility to create disks from them. Then, you can either run the **service** command on the first boot disk from an OS/2 session or reboot using the new boot disks and follow the prompts.

Now, I know that installing the FixPak isn't a satisfying end-user experience. First of all, it involves two utilities, **loaddskf**, which is included with, but is not installed by, OS/2, and a third-party unzipping utility that IBM doesn't supply. Second, the package is created and installed almost completely from the command line. Is that what people bought a user-friendly GUI for?

Editor's note: As with all OS/2 fixes, make sure that this FixPak addresses problems that you have and don't install it simply as a matter of course.

A Sampling of Bugs that the OS/2 Warp FixPak 005 Corrects.

- *Chkdsk* trapping the system on a 128MB or 512MB partition.
- *Chkdsk* generating an access violation at 00004825.
- <Ctrl+Alt+Del> not rebooting system after shutdown.
- OS/2 Warp not formating unformatted 1.44MB disk.
- 1.44MB disk formatting as 2.88MB with *ibm1flpy.add*.
- Printer off-line message after installing OS/2 Warp.
- Non-working Internet dialer downloading from Advantis.
- The session closing when "close window on exit" is unselected on a DOS windowed session under OS/2 Warp.
- Data corruption during I/O on hard drive connected to PCI IDE port.

IBM to begin OS/2 Warp preloads

IBM is starting to preload OS/2 Warp on its own PC company's systems with an interesting new program. Select-a-System is a new IBM bundling arrangement that preloads OS/2 Warp on its systems. Users have the choice, when they first turn on their new computers, of removing OS/2, or using OS/2 with the option of dual booting to DOS and Windows. The Select-a-System is available on the PC300 and 700 series. The Mobile division (ThinkPads) will be joining in this program soon and Aptiva will be coming on-board later in the second quarter of 1995.

The kicker to this announcement is that the Select-a System program is only available on IBM computers that have at least 8MB RAM. Apparently, IBM has given up on their claim that OS/2 Warp is "giving you 32-bit high performance—even in low memory (4MB) systems."

OS/2 news from Object World

At Object World in Boston, March 21-23, a couple of updates were announced regarding some OS/2-related object technology.

First, CI Labs, along with IBM, offered a list of 24 computer vendors pledging to support OpenDoc on OS/2. Some of the companies are household names in the OS/2 community, including Sundial, Footprint, Hilgraeve, Development Technologies, Athena Design, and Clearlook. Other participants include client/server programming companies, such as DST Systems, Asset Software International, and Cirrus Technology. Development tool vendors include Watcom, MetaWare, and Micro Focus and large corporate sites include MCI, US Trust, and CSX Technology.

This announcement was accompanied by an updated schedule for OpenDoc for OS/2 that indicated that the 1.0 shipping date has slipped from summer to fall 1995.

Taligent, on the other hand, has announced that they are on track to meet their original schedule. In an announcement at Object World, Taligent stated that they have released their final beta on the neutral reference platform (IBM's AIX) to all major investors (IBM, Hewlett Packard, and Apple) who will now port the beta to their various platforms.

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OS/2 Vendor Council

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PROVANTAGE
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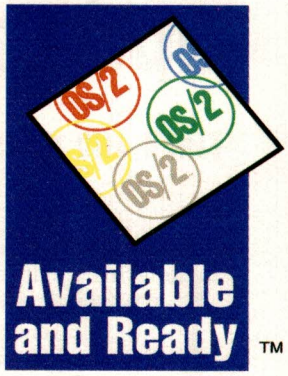
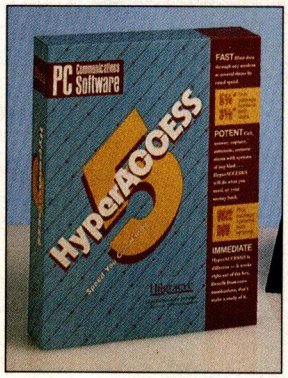
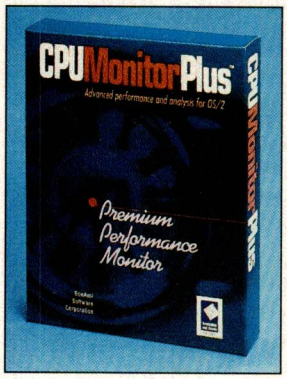
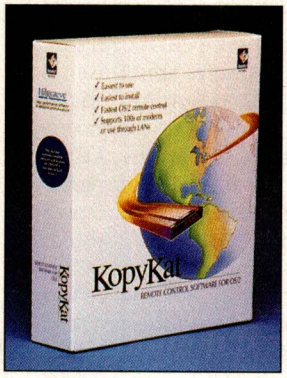


HyperACCESS/5 V3.1 byHilgraeve
Discover how good communications can be. This award-winning async comm program includes named support for 200+ modems, built-in virus protection, twelve fast file transfer protocols (including Zmodem) and seventeen terminal emulations. "Editors' Choice" PC Magazine, "Best Buy", PC World, "Best for OS/2", PC Week.



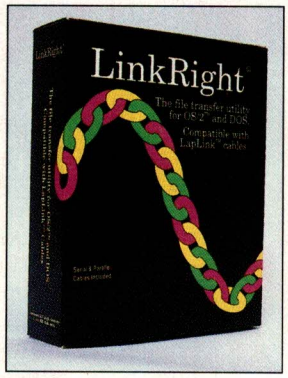


CPU Monitor Plus by BonAmi
CPU Monitor Plus is your professional Performance Monitor and Analysis package. Display realtime CPU, RAM, Disk, Interrupt and COM port activity. Diagnose poorly running systems. Start, stop and suspend programs. Set execution priorities. Over 100 different metrics, ratios and more.

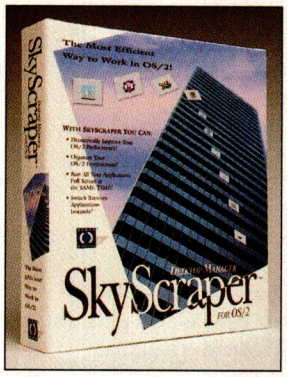


KopyKat V1.1 by Hilgraeve
Graphical OS/2 remote control. Display the entire remote OS/2 desktop in a window on your OS/2 system. Anything you can do locally, you can do remotely with KopyKat. New faster Version 1.1 includes file transfer, TCP/IP, Netbios, and named support for 200+ modems.

LinkRight by Rightware
LinkRight is a parallel port and serial port file transfer utility made especially for OS/2. The package includes a PM version, an OS/2 command line version, and a DOS version. Maintain EA's and long file names. Supports HPFS and FAT files. CRC checking to insure accurate transfers. Compatible with LapLink cables.



SkyScraper™, Desktop Manager for OS/2 by Binar
OS/2 POWER USERS! Realize the full power of OS/2 with SkyScraper™ Desktop Manager for OS/2. This application gives you practically unlimited **screen real estate**. **Virtual desktops** at a single click; all your applications run **maximized** on their own desktops! Launchpad!and many other features – a MUST for any serious OS/2 user.



OnCmd xBase for OS/2 by On-Line Data
OnCmd harnesses the power and the speed of OS/2, enabling you to create native 32 bit GUI applications in the familar xBase language. OnCmd's user-friendly development environment comes with screen painter, report generator, and is client/server ready. Unlimited runtime licensing available.

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Together Again

AFTER BREAKING AWAY FROM MAINFRAMES, PCS ARE COMING BACK TO THE NET. BY AMY D. WOHL

Personal computers were our Greta Garbo period. Millions of users loudly proclaimed: "Let me have control over my own computing environment—all of it. I want to be left alone." But human beings are social animals and we generally work in teams and organizations, which makes it unlikely that a computer architecture that isolates users on their desktops could be enduring.

In fact, the age of the personal computer has been paralleled by the age of the local area network. It just wasn't immediately apparent that LANs and PCs were destined to be much more interesting together than either of them had been separately. LANs took a long time to become widely accepted. LANs were invented in the 1970s and named in 1980 (and marketed hard and long by large and powerful companies like Xerox, Digital, and IBM), but they didn't really take off until the late 1980s. Today, it's almost a given that a new corporate PC will be sold with a LAN connection and used in a LAN setting.

On the home front (or for mobile users who are away from their LANs) togetherness is also appealing. A few users do install home LANs, but not many. However, modems and remote-computing support permit many users who are detached from the LAN to use it at arm's length. Even consumers have learned to prefer togetherness. What is the rush for the Internet and on-line services, if not a longing for shared communities of interest in cyberspace—a kind of virtual LAN that is perhaps more interesting than the physical connections that we establish in our offices? Today, it's still too chaotic and uncontrolled to be a suitable replacement or even a reliable complement for everyone.

The age of the personal computer has been paralleled by the age of the local area network.

But the LAN is no longer under debate. LANs are a necessary component of the client/server architectures that we are now moving to in our businesses. The big change is the kind of software we're starting to put onto the LAN. We no longer think of LANs as just a way to share files and documents, but as a computing environment that provides the kind of services and applications that might have run on a minicomputer or mainframe in some earlier period of information systems design.

The LAN becomes the focus of our shared information activities. User access to services is managed, services are provided, software is offered—either as a shared service like e-mail, a downloadable individual service (think of this LAN-stored personal software as library books that are checked out; we don't need to buy a copy of a novel or reference book for everyone in our town, just enough copies to satisfy the number of people who'll want to use them at the same time), or the ongoing management and distribution of desktop software.

Services are provided by loading a set of appropriate software servers onto one or more physical (hardware) servers that are attached to the LAN. Networked and shared applications will also reside on these servers.

In this new view of the world, user organizations might buy their collections of servers by simply selecting them as they needed them, identifying new needs as their LANs and user activities grow. In some sense, that's been going on for a few years. Many software vendors have been offering products, many of which provide software in only one or a few specialized areas such as network administration, software management, and electronic mail. Now, a new game is underway.

Each of the major PC software vendors—Microsoft, Novell, and Lotus—now has a strategy to sell multiple servers that provide a varying set of services to its customers. They have strong arguments for buying the entire set from one source, largely based on higher levels of integration and (perhaps) on better pricing. But they're not the only players in the game.

Other important software providers, having seen the switch in the game rules, are also beginning to put together what we refer to as server "stack" strategies that have enabled them to compete. We think strong competition is likely from IBM and Oracle, who have their database and system-services software businesses to defend as the market moves to client/server architectures. Computer Associates and Hewlett Packard are also likely players.

We can already see the pre-game

activities shaping up. Microsoft started up the shift in emphasis with its announcement of the BackOffice—a package of existing, new, and not-yet-shipping network servers, all of which were based on Windows NT. Not much here for an OS/2 aficionado. But Novell, Lotus, IBM, Oracle, CA, and others have a great deal of respect for the installed base of OS/2 servers in corporate accounts and generally offer their services packaged onto OS/2 servers as one of their choices. OS/2 client support, on the other hand, is much sparser. Most vendors seem to assume that most users are running Windows, UNIX, or Macintosh at the desktop level. IBM is, of course, an exception.

Two basic, and different, server stack strategies exist. One is relatively monolithic, where the vendor expects that you'll buy all of your services from them and only buy from third-party software sources when they have no equivalent product. Such vendors aren't very interested in supporting a variety of platforms—they tell you what to use. You do get more integration, but you sacrifice flexibility, freedom of choice, and you may pay more (because it's harder to have competitive pricing in this kind of marketing scheme).

The other server-stack strategy is basically open and heterogeneous. The vendor builds to institutional and de facto standards, supports many APIs (not just their own), and supports many platforms. They assume that you will buy part of your solution from them and the other parts from other suppliers. They offer you more integration if you narrow your choices, but it's your trade-off—not theirs.

Of course, the market still contains dozens of individual players who offer only parts of solutions and who try to sell into the strategies of the major players. They look for good matches between customers (markets) and platforms, as well as situations where they have an edge with technology or unique market knowledge.

How is the customer best served? That depends on what you're looking for. Monolithic solutions are fine if you are confident that your needs can be satisfied by a single platform and vendor or by sticking with third-party partners who will extend that strategy while remaining compatible with your APIs. If you are aggressively heterogeneous and likely to continue to make heterogeneous choices, this approach may give you pause. In that case, you might be better off with a vendor who's committed to supporting multiple platforms.

Remember, there's no free lunch. If you opt for freedom of choice and flexibility, you have to give up some level of integration (and probably should be prepared to spend an additional level of effort) in return. Freedom has a price. But we all knew that. If you want it, you should be prepared to pay for it.

Amy D. Wohl is president of Wohl Associates, a consulting firm specializing in office information systems, personal computing, and end-user computing. She is also editor of the Trendsletter, a monthly newsletter on computer industry trends.

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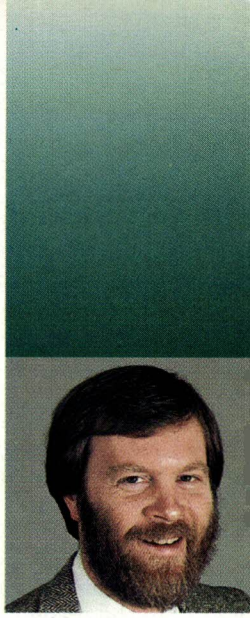

Win32 Support on OS/2?

PLATFORMS MAKE KILLER APPLICATIONS—NOT THE OTHER WAY AROUND.

BY WILLIAM F. ZACHMANN

OS/2's Windows support has long been a subject of controversy. Support for Windows NT and Windows 95 applications, which were built with the Win32 API, has recently become an even more hotly contested topic. Some of OS/2's most enthusiastic supporters (as well as some of its critics) have claimed that by providing support for Windows applications, IBM undermines OS/2 by eliminating any motivation that developers might have to create native OS/2 applications. But, they are wrong. This claim is superficially reasonable and arguments that are apparently plausible can be made against the support of Windows applications by OS/2, but OS/2's ability to support Windows applications does not undermine OS/2's success. On the contrary, it is one of its primary strengths.

The killer apps

The fundamental argument against support for Windows applications (including the 16-bit applications that are already established in the marketplace or the new 32-bit applications for Windows NT or Windows 95) is both simple and straightforward: If OS/2 really runs Windows applications as well as or better than Windows does, developers will have no reason to bother to create OS/2 versions of their Windows applications. That argument rests, however, on an assumption, which, although commonly accepted, is demonstrably wrong. The assumption is that the primary key to success for an operating system is one or more "killer apps" that are unique to that operating system. This assumption is based on the notion that it was Lotus 1-2-3 that made the IBM Personal Computer successful, Aldus Pagemaker that made the Apple Macintosh successful, and so on.

OS/2's ability to support Windows applications does not undermine OS/2's success. On the contrary, it is one of its primary strengths.

This wisdom, however, is not nearly as wise as it is common. In fact, the IBM PC was a smashing success by the time 1-2-3 was released and the original Macintosh had become successful (though on a more limited scale) before Pagemaker was available. It is true that 1-2-3 quickly became the best-selling application on the IBM PC and that Pagemaker, in particular, and desktop publishing, in general, were significant applications on the Macintosh, but neither platform became successful because of its applications.

What's more, the "killer apps" theory only holds up if, and only if, the platform offers fundamental capabilities that are superior to those of previously available platforms. The new operating system platform must truly offer capabilities that its competitive predecessors did not.

It's the operating system

The IBM PC and PC DOS did, in fact, provide a substantial increase (to 640K) in the memory that was available to applications in comparison to the much smaller amount of memory (64K) that was available to applications under CP/M. Lotus 1-2-3 took advantage of that larger memory, which would not have been possible with the memory constraints of CP/M. Similarly, Pagemaker took advantage of the Macintosh's graphical user interface, Adobe font support, PostScript printer support, and other innovative capabilities. Both so-called killer apps made good use of the unique capabilities of the new platform—capabilities that were not previously available on any other platform.

In fact, neither the IBM PC nor the Macintosh achieved its success as a result of any killer apps. Pagemaker and 1-2-3 relied heavily on the unique capabilities of the operating system platforms for their own success. They became what were later called killer apps precisely because they made excellent use of the capabilities that PC DOS and the Macintosh offered, which prior competitive platforms were unable to provide. Moreover, both platforms, relative at least to their current market position, were well established before those applications were introduced.

Win-OS/2

The argument that support for Windows applications on OS/2 is a bad idea because it inhibits the development of superior native OS/2 applications and so undermines acceptance for OS/2, fails on all counts. It makes sense if, and only if, you believe that native OS/2 applications cannot possibly be built that are superior to Windows applications in ways that matter to users. But, if you believe that, you have hardly any reason to expect that OS/2 will succeed in its race with competitors in the first place.

Absolutely none of the participants in the present competition over operating system platforms, including Microsoft, claims that the old single-tasking limited-memory model of DOS and Windows 3.x is sufficient for the future—for corporate systems or individual use. The entire point of Windows NT and Windows 95 (at least as claimed by Microsoft) is that they overcome the limitations of DOS and 16-bit Windows in the home as well as in the office—precisely the same claims as those made by IBM for OS/2.

The question isn't whether 16-bit DOS and Windows is adequate for the future. Everyone agrees that it is not. Instead, the question is: Which of the various alternatives is best suited to replace old-fashioned 16-bit DOS and Windows over the next few years. The winning platform will be the one that does it best with the best balance of performance and capability for the least amount of money.

The real key to the success of any new operating system platform is quite simple. It has two parts. First, it must be able to run existing applications at least approximately as well as, or better than established platforms and alternatives. Second, it must enable new applications that are truly superior to those of established or alternative platforms. These superior applications will not necessarily happen immediately (to change operating platforms does, after all, take some time).

OS/2 Warp will be the undoubted winner in its fight against 16-bit Windows (for example, Windows 3.x) if it is given sufficient time. It runs 16-bit Windows applications as well as Windows does and clearly runs DOS applications better than Windows does. If Microsoft were to try to stand pat with Windows 3.x, they would surely lose. Even Microsoft knows that, which is why they've worked so hard on Windows NT and, more recently, Windows 95.

Win32 OS/2

OS/2's support for Windows applications has, in fact, been one of its greatest competitive strengths. It has become increasingly apparent to users that even if they only want to run 16-bit Windows applications, OS/2 provides a very attractive alternative to Windows—despite Microsoft's transparent efforts to create pseudo "incompatibilities" with OS/2. Not only is OS/2 more compatible with DOS applications, but it provides a more stable platform for Windows applications.

To extend OS/2 Warp's Windows support to include 32-bit Windows applications that were written for Windows NT or Windows 95, therefore, makes perfectly good sense for IBM and OS/2. Like the quite remarkable IBM Workplace Shell for Windows 3.1, support for Win16 and Win32 applications on OS/2 really undermines Microsoft's attempt to create a winner-take-all zero sum game between Windows and OS/2. It gives users ample opportunity to have their Windows cake while eating and enjoying the growing selection of more capable native OS/2 applications that are starting to appear—it seems almost weekly, from a growing number of vendors—large and small. This trend should be welcomed by anyone who truly wants OS/2 to be successful.

Will Zachmann, a well-known computer-industry analyst, is the founder and president of Canopus Research, based in Duxbury, Mass. He is also a former vice-president for corporate research of International Data Corp. You can reach him on CompuServe at 76004,3657, or on his popular CANOPUS forum.

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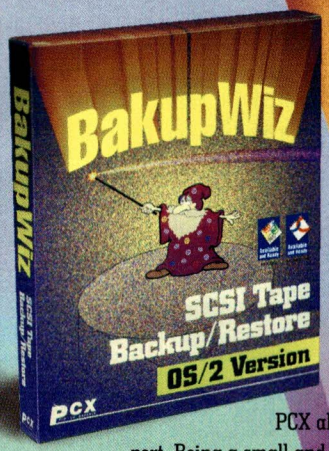

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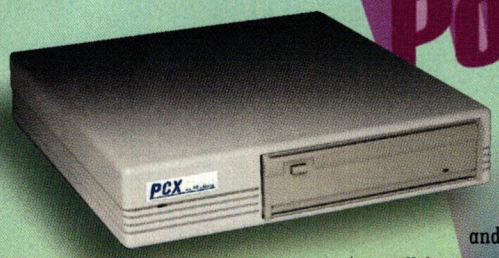

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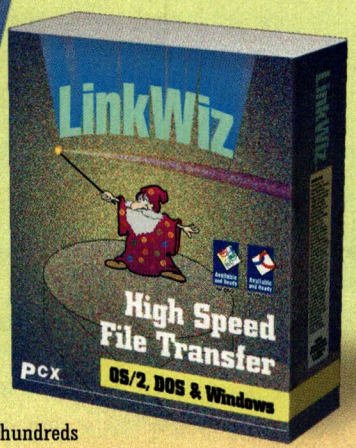

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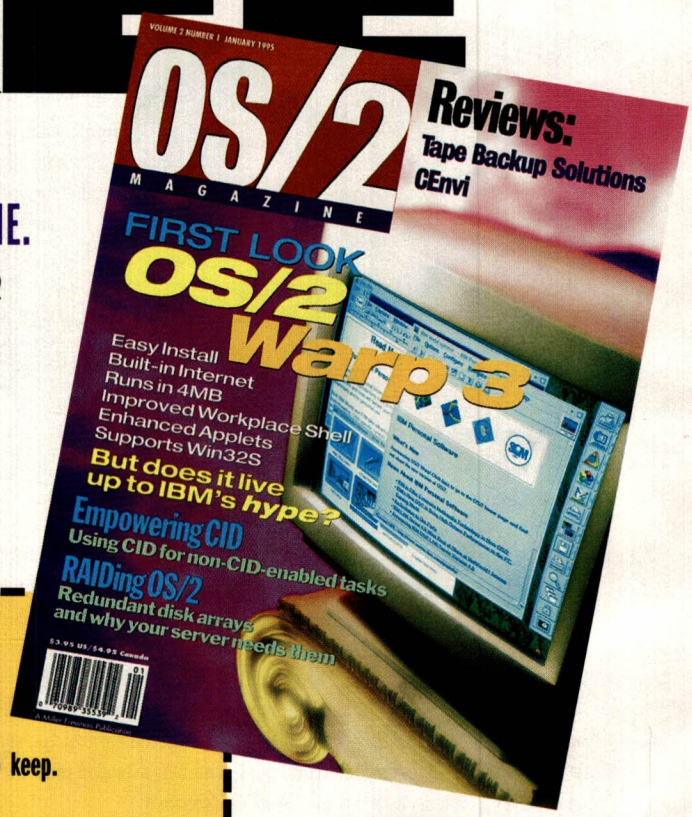

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Desktop Add-ons

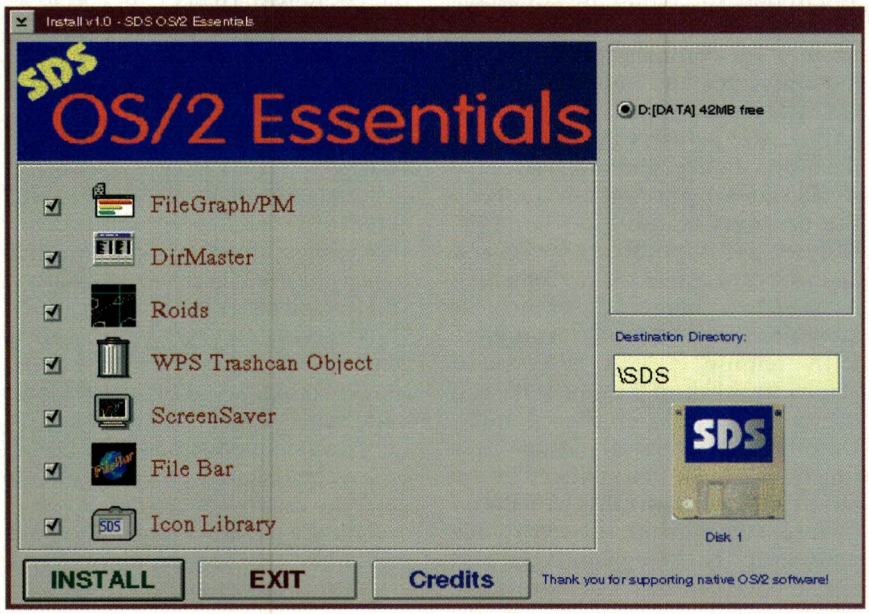
OS/2 ESSENTIALS, XFOLDER, AND ASCEND WIN-OS/2 SETTINGS.

BY BRIAN PROFFIT

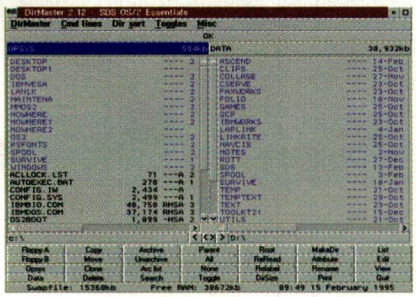
OS/2 Essentials

Over the years, OS/2 has attracted hundreds of handy tools and utilities—many of them shareware. But lot of people don't have the time or the inclination to browse the on-line services and test the wide variety of offerings to see which they prefer, individually registering each of them and installing any updates to commercial versions that the vendors might send after registration.

Stardock Systems has provided a way around these problems by offering a product called OS/2 Essentials. It wouldn't be fair to call OS/2 Essentials merely a collection of shareware, because it contains the fully registered commercial versions of six popular programs with a good selection of icons that have been thrown in to help you customize your desktop. Let's take a quick look at each of the included programs.



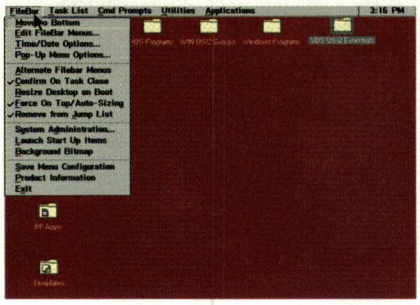
DirMaster



Many of us diehards are still using the command line for a lot of our work. It often seems like a lot of trouble to open two separate directory windows and drag and drop an icon when typing a copy command is so quick and easy. Dozens of other file-manipulation functions don't always seem as convenient using standard Workplace Shell (WPS) techniques. DirMaster provides an alternative that can be more convenient than either the command line or drag and drop.

As shown in the screen shot, DirMaster combines file lists with plenty of push buttons to allow single-click manipulation of files. The program is extremely configurable, allowing you to specify the number of push buttons and the action associated with each of them. You can associate programs with buttons, so that a click automatically unzips a marked file, for example. You can also drag files back and forth between the WPS and DirMaster, getting the best of both worlds. In fact, you can use drag and drop between the two lists within the DirMaster window. If you don't use drag and drop because you don't want to keep drilling down through folders to find your file, you might find DirMaster is the perfect glue that holds together the command-line productivity with the Workplace Shell. Type the directory name at the bottom of a DirMaster window to immediately go to the desired folder/subdirectory. Then, drag the file from DirMaster and drop it on your program!

FileBar



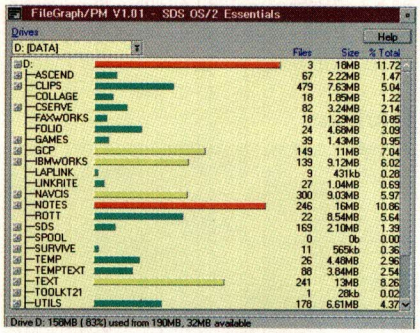
When IBM created the LaunchPad, they tried to put commonly needed

objects together in one place to make it easier to use. The Launch Pad helps, but it takes a lot of screen real estate. The FileBar is one of the slickest utilities around. It provides easy access to everything you need without taking up a large chunk of your desktop.

This incredibly handy utility gives you access to all of your favorite functions from a window the size of a normal menu bar. The Task List entry provides easy access to the same functions that you would expect from the <Ctrl+Esc> window. All varieties of command prompt are available from the Cmd Prompts menu. After installation, several OS/2 programs, such as the System Editor, are included in the Utilities menu and the OS/2 games appear in the Applications menu. You can configure the contents of the Cmd Prompts, Utilities, and Applications menus and add your own entries to the FileBar.

As an extra bonus, FileBar includes an appointment calendar, complete with reminders and WAV-based alarms. Just click on the time at the end of the FileBar to open the calendar. Unfortunately, using all of these great functions is made more difficult by the fact that the program offers virtually no useful documentation. The user's guide contains only three paragraphs and absolutely no on-line help is provided. Don't let that scare you off, though. The interface is relatively straightforward and the benefits of this program are well worth the effort.

File Graph/PM



One's data-storage requirements always grow to exceed the available space. — Proffit's Law

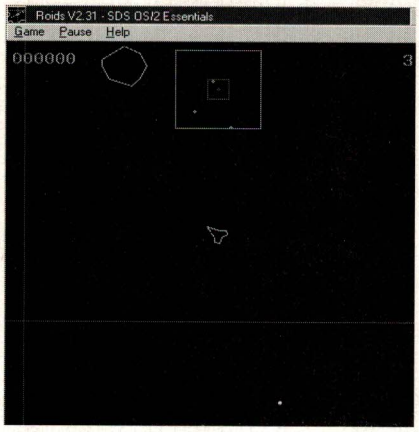
Starting with the assumption that you're a normal computer user, I leap forward to the conclusion that your disk is nearly full. You'd like to free up some space, but on today's large hard disks you often don't know where to start. File Graph/PM is a visual aid that helps determine how your disk space is used.

File Graph/PM is not as detailed as Capstone Software's SpaceMap, but it does provide a graphical indication of the programs that use the most space. Different colors draw your eyes quickly to the largest directories on your disk. It's annoying, however, that the window can't be resized. I'd like to be able to see an entire disk at one time, which isn't often possible if you have a lot of subdirectories. Still, it is a handy addition to the package.

Icons

We're all individuals—just look around at how people dress! One of the easiest ways to dress up your OS/2 desktop is to use customized icons—particularly if you run character-based applications. Those rectangular gray icons that are so creatively labeled as "OS/2" and "DOS" can get boring. OS/2 Essentials includes more than 60 icons to use on your desktop with a simple drag and drop. Okay, I can't claim that they provide a real productivity improvement. But, if you've ever hung a picture on your office wall, you know that the appearance of your work environment matters.

Roids

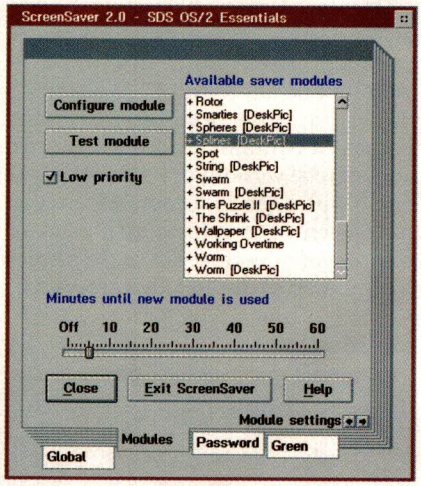


All work and no play makes Brian a real grump. But you aren't allowed to take out your frustrations on your magazine editor and games like Doom have reignited controversy over violence in computer games. So what can you blast away at while remaining politically correct? Rocks. Really big rocks.

People who are much older than I am tell me that this game is based loosely on one of the pioneer video games, Asteroids. Only now you can play it on your office computer while your spreadsheet is recalculating in another window. The game is somewhat different from the original. New options include spontaneously regenerating rocks (are they pregnant?) and sound effects that take advantage of Multimedia Presentation Manager/2.

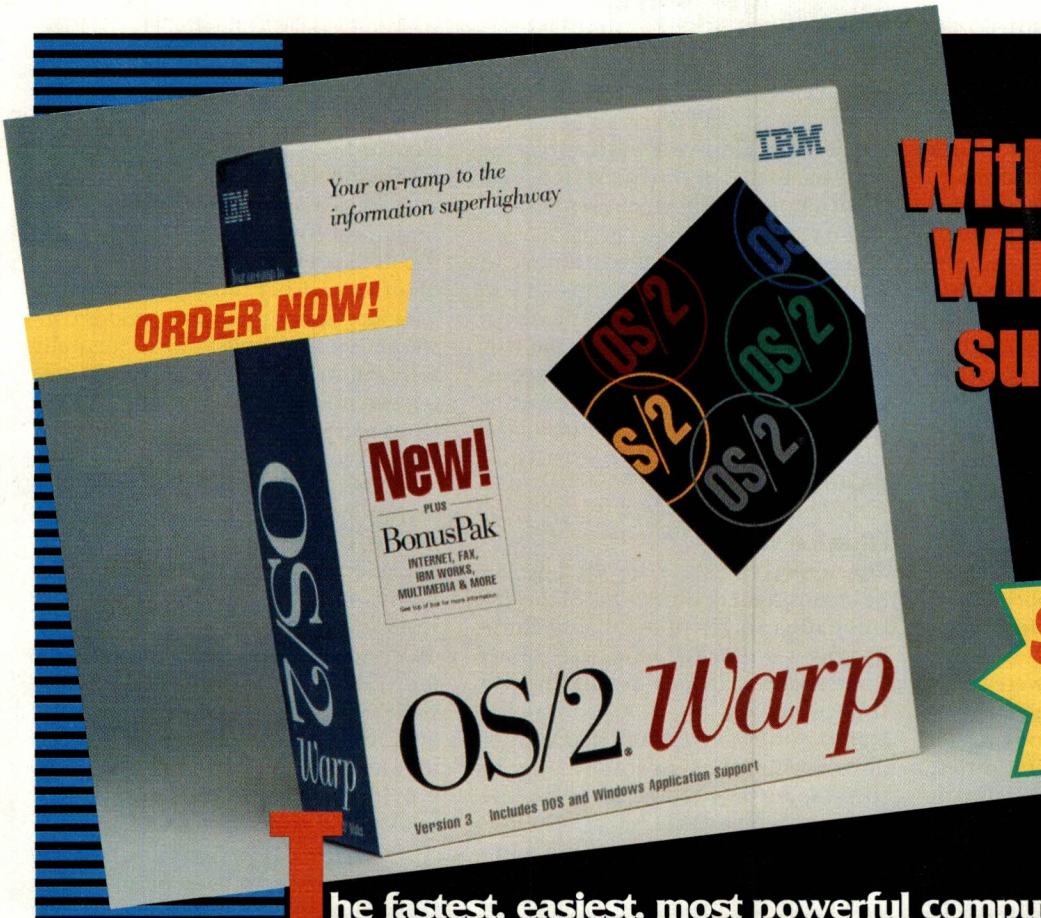
This continuous-motion video, which is made up of several independently moving objects and coordinated sound effects, can take some computer horsepower to maintain. You probably won't be happy with the performance on 386 or 486SX systems because of the math it uses to calculate the object trajectories.

ScreenSaver 2.0



Okay, I've heard all the arguments that modern computer displays don't need to be "saved." It is true that the phosphors that coat the inside of modern displays are less likely to become damaged by long-term exposure to the same beam pattern that traces an image across them. So what? That ceased to be the reason people want screen savers long ago.

One reason people use screen savers is for security. After a period of inactivity, which you can set from one to 60 minutes, ScreenSaver takes over the control of your computer. If you specify



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password control, your password must be entered to unlock the computer. You can also configure ScreenSaver to lock the system automatically on startup.

Of course, OS/2 already includes this minimal level of security. But when OS/2's security takes over, the screen simply changes to a bitmap (the OS/2 Warp logo by default). That's fine for the people who remember the original Asteroids, but the MTV generation craves more visual stimulation. [Hey, I'm a member of the MTV generation *and* I remember the original asteroids—go figure!—Anne Mellinger] Why let all the computer horsepower sit there just to show a still picture when it can be entertaining?

ScreenSaver includes a collection of interesting visual gimmicks to hypnotize you when your computer is idle. It also supports modules that were created for DeskPic, another popular shareware program. Even better, you can create your own ScreenSaver modules. You can incorporate your own bitmaps or, if you're a C programmer, you can create complete graphic programs.

ScreenSaver occasionally takes over before the requisite period of inactivity has elapsed—particularly if you are working in a windowed Win-OS/2 session. This annoyance appears to be shared by all OS/2 screen savers. It's fairly easy to overlook if you aren't running in password mode.

Actually, the advances in display technology have brought a different meaning to screen saving. If your monitor conforms to the DPMS Green specifications, ScreenSaver can actually turn it off after a long period of inactivity. When you reactivate the computer, the display turns back on automatically.

Trash Can

Trash Can is a Workplace Shell object that replaces the Shredder on the desktop. It also provides some other useful functions. Some types of objects (for example, read-only files) can't be dropped onto the Shredder. The Trash Can, though, can dispose of almost anything.

On the other hand, it doesn't necessarily destroy them right away. True to the desktop metaphor, things dropped into the trash remain until the trash can is emptied. That gives you an opportunity to change your mind and move objects back to other places on the desktop. Emptying the trash can be done manually, or you can set it to take place automatically whenever the system is restarted.

You have to be a bit more intrepid to explore the Trash Can, because it was completely overlooked in the documentation. By the time you read this column, Stardock hopes to have updated the documentation. In the meantime, you can look at the *trashcan.doc* file that is copied into the OS/2 Essentials subdirectory.

Glee or flee

The support for shareware offerings can be inconsistent at times. One of the distinct advantages of acquiring these products under the OS/2 Essentials umbrella is that they are all directly supported by Stardock Systems. Stardock, however, didn't add a lot of documentation. You should plan to spend some time browsing the on-line help for each program.

Still, they are useful and fun additions to OS/2. I don't know if I would go quite as far as Stardock Systems and call them "essential," but parts of the package (particularly FileBar) are worth the price all by themselves.

XFolder

The Workplace Shell is still a rather new operating system interface. And, while it is a relatively easy interface to learn, it can take more time before you grow to understand and exploit the nuances that WPS offers. One area in particular is the arranging of icons—both on the desktop and within folders. XFolder is a tool that can provide some help in arranging icons neatly and moving the icons back if you don't like the change.

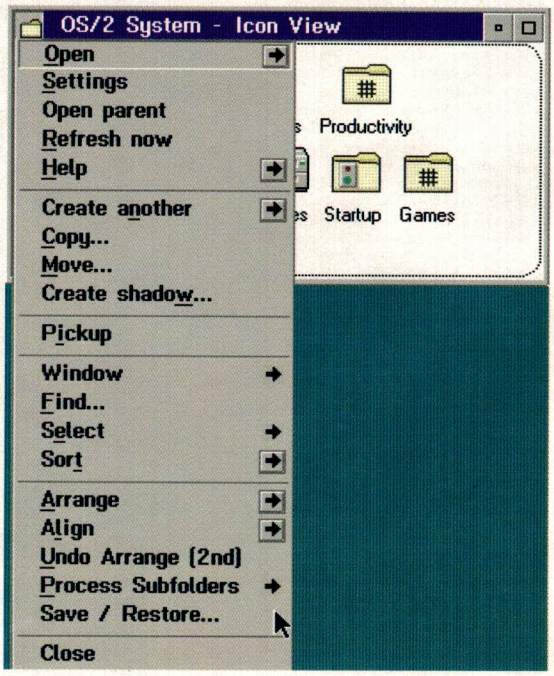
Arrangeaphobia

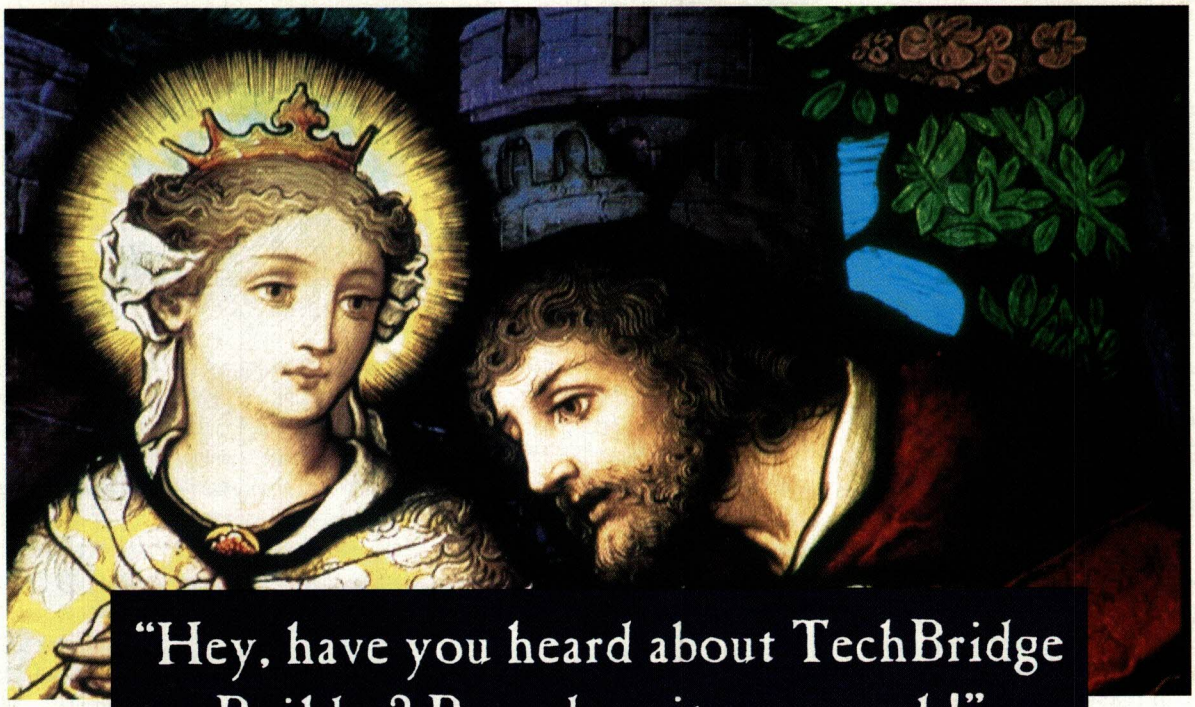
OS/2 allows you to put icons anywhere you want within a folder. In fact, after installation you are likely to find objects around the top, left side, and bottom of your desktop. Opening folders is likely to reveal icons scattered without any clear order. IBM provided the **Arrange** command to structure icons in a folder and help you organize them. It is important to remember that the desktop itself is a folder—one that contains all of your other folders and objects. This fact has caused some serious consternation to people who accidentally selected Arrange from the desktop's pop-up menu and found that all their icons had popped to a row at the top of their screen.

To help solve this problem, Warp introduced a new option on pop-up menus, Undo Arrange. This option has helped to remove a look of terror from many faces. Still, you probably wouldn't purchase an editor or word processor these days that didn't have multiple levels of undo to help back you through several changes. Not only does XFolder provide support for multiple levels of Undo Arrange, but it also provides the same "oops" protection for Sort and Align operations.

New techniques

Observant readers will already be scratching their heads, wondering what an Align operation is. XFolder adds a new Align entry to the pop-up menu of open folders. This function is more restricted than Arrange, but is still





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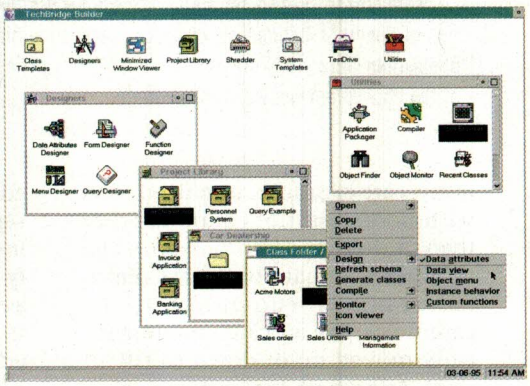

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quite useful. This operation will move icons either horizontally or vertically so that they are in rigid columns or rows, depending on which you select from Align's sub-menu. However, it only moves them in the specified direction.

The Arrange operation has been enhanced to provide much more flexibility in the layout of icons within a folder. Arrange now has a sub-menu that allows you to specify arrangement in four different ways. The first choice is Within a Rectangle, which is essentially the current WPS default. Objects start at the window's top-left corner and move right, placing each new object up against the one beside it until the row is filled. Then, it starts a new row. The XFolder Rectangle method differs from the WPS default, though, in that OS/2 tends to change the order of objects in the folder, whereas XFolder attempts to keep them in the same sequence. Well, mostly. XFolder gives you more control over object sequence by noting any objects you might have marked before starting an arrange operation. All marked objects are processed first and are followed by the remaining objects in that folder.

The second arrangement technique is around the Perimeter. This unusual option allows you to specify a particular corner or set of corners in the window that should *attract* objects during arrangement. This is an especially useful method if you are using a bitmap as the folder's background. If, for example, you have a full moon glowing in the upper left corner of the bitmap, this technique allows you to organize your icons around the lower and right edges, letting the image show through undisturbed. By the way, XFolder also allows you to specify margins for the work area. You can avoid covering the crashing surf or the Launch Pad at the bottom of the screen.

The third arrangement technique is in Columns. With this method, objects are spaced in the rows so that they appear in straight columns. This technique is similar to the one used by the Windows Program Manager. The fourth option on Arrange's sub-menu is Rows. This technique is similar to the Rectangle method. The objects are organized into fixed rows with no thought of columns other than the left edge of the window. The difference is that objects are maintained in their current row to the extent possible and aren't automatically moved up or down to fill all rows. As a result, you can have only partial rows at the top of the window, which isn't possible with the Rectangle method.

New Save/Restore entries on the pop-up menu allow you to save the layout and positions of windows on the screen so that they can be restored to the same configuration later—even after shutdown and restart.

A system-oriented tool

XFolder also adds a Process Subfolders entry to the pop-up menu. You can tell XFolder that the rearrangements you specify should be applied to the current folder and all subfolders within it. Using this option on the desktop applies rearrangement commands to all folders on the desktop.

Well, maybe. XFolder works by taking advantage of the object-oriented nature of the Workplace Shell and replacing the folder class. During installation, however, you can specify that existing desktop objects not be assigned this new class. If you specify that, XFolder will only work on folders that you created by using the new XFolder template.

By the way, this tool legitimately uses the System Object Model to affect the behavior of OS/2 Warp. WordPerfect for Windows uses a similar technique in its OS/2 Integration Tools to make their program look and feel as if it was native to OS/2. Unfortunately, the pioneering nature of these companies' efforts has uncovered a heretofore unknown bug in the Workplace Shell. As of this writing, there isn't a fix, so you can't run XFolder and WordPerfect for Windows' OS/2 Integration Tools on the same computer.

Nobody's perfect

This tight coupling with OS/2 Warp gives the Desktop Company the added responsibility of providing a complete uninstall procedure. The

Windows Test: Ascend 4.0

Ascend is a very popular Windows-based personal information manager with a history of difficulties running on OS/2. If you're still running OS/2 2.1, you need an updated version of *planner.exe*, which is available from Franklin Quest's BBS at (801) 977-1991 as *ascos2.exe* (a self-extracting file). I had problems running Ascend on OS/2 2.1 in any mode other than a full-screen Standard mode session.

Ascend has been added to OS/2 Warp's migration database, so OS/2 will detect it and assign a default set of Win-OS/2 settings. Because of the problems with earlier versions, those default settings are for a full-screen Standard mode session. Franklin Quest recommends Enhanced mode, though, for smoother performance and better memory management. Under OS/2 Warp, I was able to run Ascend in both Standard and Enhanced modes, and full-screen and in a window. It successfully popped up alarms—even when minimized on the OS/2 Warp desktop. A Personal Information Manager is not a program that is overly performance sensitive, but it is important that it be convenient. So even though windowed sessions are a bit slower than full-screen sessions, I recommend that you change your Win-OS/2 settings to Enhanced mode and Windowed.

If you have to call Franklin Quest technical support, don't mention OS/2. I did and was transferred to five different people before landing in someone's voice mail. That problem might, however, be improving. Version 5.0 will be out soon and a Franklin Quest representative said that he expected it to be tested for compatibility with OS/2 Warp.

Note: These brief sections on Windows applications have been added to provide an indication of general functionality, and recommended setting changes that are needed to make the application work. They are not detailed product reviews, nor a representation that all features of the application will work under OS/2.

Desktop Company provided a partial solution, which includes a program that will remove the new XFolder object class from the Workplace Shell, returning folders to the original folder class. But it doesn't remove the XFolder code from your disk. That's somewhat understandable, because the dynamic link library (DLL) can't be deleted while it is still in use. But the uninstall program also doesn't remove the XFolder template from the Templates directory, so the DLL will still be in use and you won't be able to remove it unless you manually remove that directory from the Templates subdirectory. Then, you can remove the XFolder subdirectory. The documentation needs to tell you how to go about finding and doing this.

The installation procedure takes place in a command window. After it has told the user that installation is complete, you are taken through a series of incredibly annoying panels with snapshots of usage instructions for XFolder. This is no place for such information—at least not in a series of 10-line character boxes that the user must page through manually. Because this information is the same as the *readme.txt* file on the disk, it is a needless annoyance that establishes a first impression of the product. I saved this section for the end, because I hope that early impression won't sour you on XFolder. It is a very handy utility. The documentation is nearly non-existent, but the on-line help is good, including graphics to show how operations affect folders.

Glee or flee

If you order quickly, XFolder isn't a bad deal at $19.95. The non-introductory price of $29.95 seems slightly high for a utility of this nature—at least for an end user. Corporate help desks, though, might want to explore a site license to save many hours of guiding users through reconstruction of their desktop.

Brian Proffit has been in the computing industry for 20 years. He was part of IBM's OS/2 team, left IBM to become the director of PC Week's Corporate Labs, and is now the president of Visionary Research. Brian is the author of two books on OS/2, is a contributing editor for OS/2 Developer and senior contributing editor for OS/2 Magazine. He can be reached at 75300.1466@compuserve.com.

RESOURCES:

OS/2 Essentials SRP ($29.95)
Stardock Systems Inc.
13405 Addison
Gibraltar, MI 48173
(313) 782-2248
Fax: (313) 782-9868
READER SERVICE NO. 151

XFolder SRP ($49.95)
The Desktop Company
1404 Durwood Dr.
Reading, PA 19609
(610) 337-5867
(Available directly for $19.95 through May 31, after which the price goes up to $29.95)
READER SERVICE NO. 152

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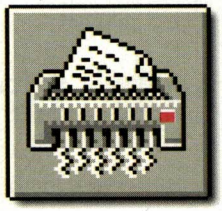

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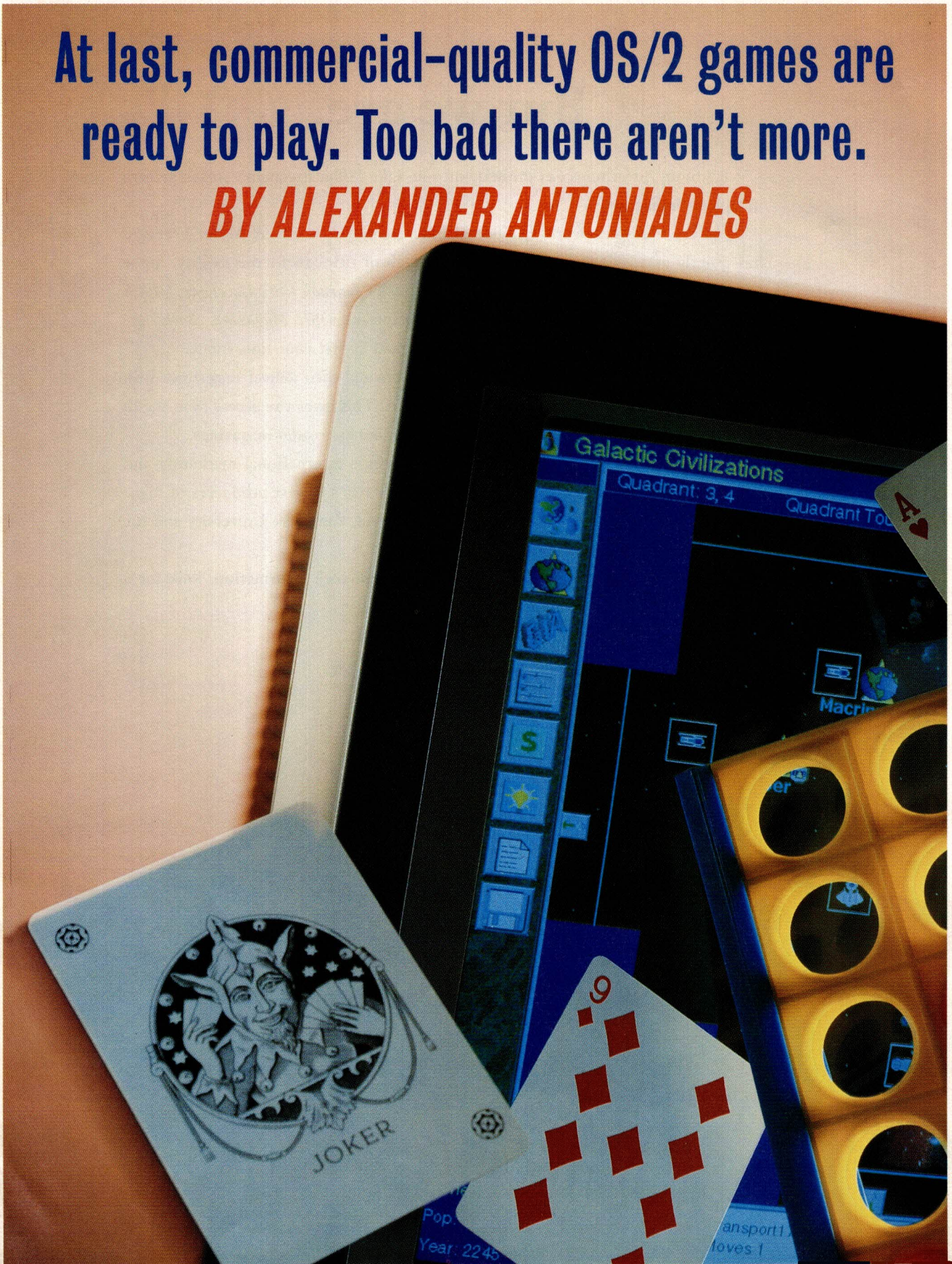
At last, commercial-quality OS/2 games are ready to play. Too bad there aren't more.

BY ALEXANDER ANTONIADES



Player's Choice

Ever since the release of MMPM/2, the multimedia interface to the Workplace Shell, OS/2 has had the potential to be a great gaming environment. Multithreading, full-motion video, digital sound, MIDI music and the built-in graphics support of the Workplace Shell offered the opportunity to make great games for an audience that didn't have any. But outside of a few small commercial and shareware releases, nothing happened.

Lately this situation, like nearly everything else in the OS/2 world, has started to change. A slew of recent shareware offerings have shown the potential

Figure 1: Galactic Civilizations.

of OS/2, with many offering sound support. More significantly, larger game makers, such as Psygnosis and Maxis, have announced intentions to test the OS/2 waters with versions of their most popular products.

In this roundup, we'll look at several currently available OS/2 games. We'll start with the only two OS/2 games that would qualify as full-blown commercial-quality releases on other, more popular game platforms: Galactic Civilizations and SimCity for OS/2. The other games we'll discuss are commercial products that are a notch above or equal to shareware games. In more competitive environments, such as Windows or Macintosh, it's doubtful that these would find commercial success.

Technical Challenges

While it's encouraging that there actually *are* commercial OS/2 games, we have a long way to go before OS/2 can match DOS, Windows, or Macintosh as a game player's operating system. You can't find a native OS/2 CD-ROM-based game —the fastest-growing category in the computer-gaming market. Alas, there aren't enough titles to support even a game shelf at most computer retailers.

Before the OS/2 game market explodes, it's clear that IBM will need to address a few technical issues. While the number of sound boards supported under OS/2 Warp has grown over OS/2 2.1, the *quality* of the drivers and the *level* of support from OS/2 needs to improve in game-critical areas like MIDI sound. Even OS/2 Warp still lacks a joystick driver, as well as multimedia file types critical to today's state-of-the-art Windows and Macintosh games, such as *.mod* music and Apple's Quicktime video.

According to IBM, future enhancements should make OS/2 a better platform for game developers and consumers alike. The first OS/2 Game Developer's Kit will become available through IBM's Developer's Connection CD-ROM. Also in the works is an OS/2 "PM Game Session," which will allow games to run in both windowed and full-screen environments. Another planned improvement is the new enDIVE (enhanced Direct Interface Video Extensions), which will use graphics boards to accelerate images using OS/2's DIVE interface. I expect both enDIVE and the PM Game Session will have to be finished before IBM will release the long anticipated OS/2 version of DOOM.

Fortunately for us, IBM isn't standing alone. MacroMedia is porting the runtime drivers for the Director multimedia authoring system to OS/2. And IBM-funded Kaleida will release an OS/2 version of their complete development environment sometime this year. Perhaps by the holiday season, we'll have a wider variety of game offerings to choose from.

Galactic Civilizations

As Captain of a starship filled with colonists from Earth, you accidentally fall into a wormhole and are instantly transported on a one-way voyage to a distant galaxy. After setting up shop on the first suitable planet, you begin rebuilding a human civilization. As you expand humanity, you find your new galaxy to be filled with new planets to colonize and alien races wanting to be either friends or enemies. This is the world of Galactic Civilizations.

Easily one of the most anticipated games by many OS/2 enthusiasts, StarDock System's Galactic Civilizations is the first large-scale commercial game written from the ground up for OS/2. This game has full sound (both MIDI and digital), a Presentation Manager application running in the Workplace Shell, multiple threads, and support for all screen resolutions and color depths.

The game itself runs in three stages. First, you need to leverage your initial starship by finding a planet to colonize, where you can build more ships to colonize other planets before alien races do. Next, you must build up the infrastructure of your planets through investment, trade, and resource management. The final stage is confrontation, which can either be military or economic. The goal of the game is to either dominate or ally yourself with all of the alien races in the Galaxy.

The nuts and bolts of this game come down to the turn-by-turn management of all the spaceships and planets in your empire. Ships that aren't in orbit, on autopilot, or standing sentry need to be given orders on where to go and what to do. Planet maintenance involves deciding what long-term projects to work on, what type of starships to build, monitoring morale, and maximizing available resources.

Luckily, while you're doing all of these tasks, a separate thread runs in the background calculating the computer players' moves in this turn-based game. This usually means a snappy response time. Once you are finished moving, the computer's simulated "players" quickly move all of their pieces into place, and you can nearly

instantly begin your next turn. On my 33MHz 486DX, this process usually took about one second, with a delay of never more than 10 seconds.

Mixed in with the day-to-day maintenance of your empire are other events to make the game interesting and add flavor. Relations with other species are managed through trade, diplomacy, and (of course) espionage. Miscellaneous events, such as deciding the fate of indigenous creatures on a new world, are used as benchmarks of your integrity and add an element of role-playing to Galactic Civilizations. These events always contain a good but expensive solution, a break-even neutral solution, and a profitable evil solution. Choosing one of these will determine your future technology tools: for example, being evil gives you access to technology such as collusion management and ethnic cleansing. What's surprising in the game is how seemingly inconsequential choices can come back to haunt you later; more than once, what I thought was only a gimmick that had no bearing on the actual game turned out to have ramifications later on. The scope and branching nature of the game is such that you could play for

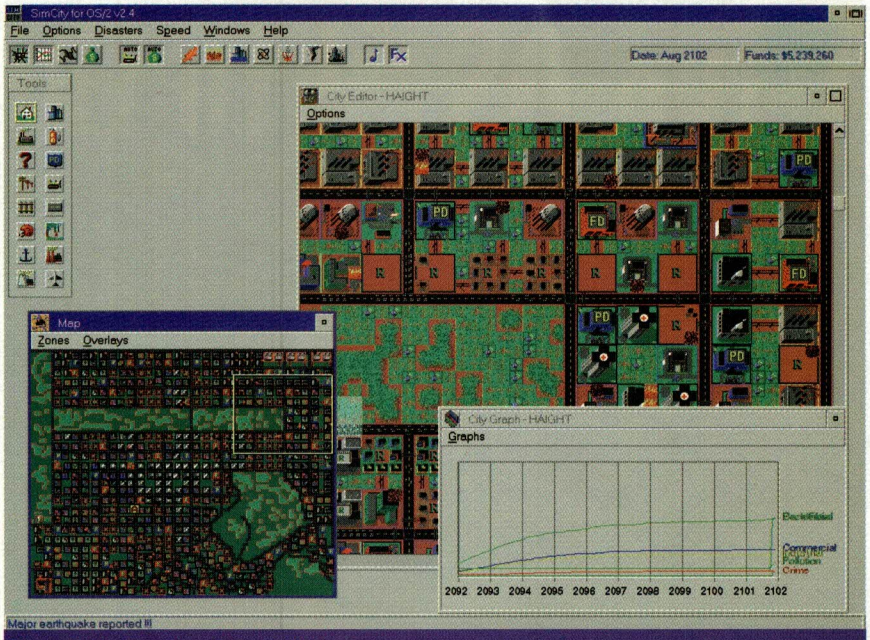


Figure 2: Sim City Classsic for OS/2.

Splat! There goes another masterpiece. It was going to be a work of art, a monument to elegance and flexibility. It was going to be your finest creation. What happened? It got beaten into unrecognisable garbage by some clumsy GUI builder. And the controls ended up as subtle as a flying sledgehammer thanks to a resource editor with an attitude.

It's enough to turn a decent living programmer into a serial killer. Somebody out there had better come up with a solution.

We just did. It's called Prominare, a professional's programming tool for GUI creation that has all the answers. Take a look at the code it generates. It's exactly the way you would have written it yourself. Define your naming convention and Prominare will stick to it to the letter.

FREE Prominare Lite AVAILABLE ON THE INTERNET TRIAL

To create custom controls, use Prominare as the resource editor and you'll have enough options to give you total freedom. It will also handle all major object libraries, PEN and multimedia. It handles all versions of OS/2 and understands your old resources or Windows resources as well.

Prominare is also intelligent. When you make modifications to an application you won't be hindered by unnecessary generation phases, it only regenerates the parts that have been modified.

Now here's the best bit. A shareware version called Prominare Lite is freely available on the Internet. Help yourself to it and see how it beats the stink out of anything else.

Then get your head around this question. If the shareware version is this good, what will the full version do?

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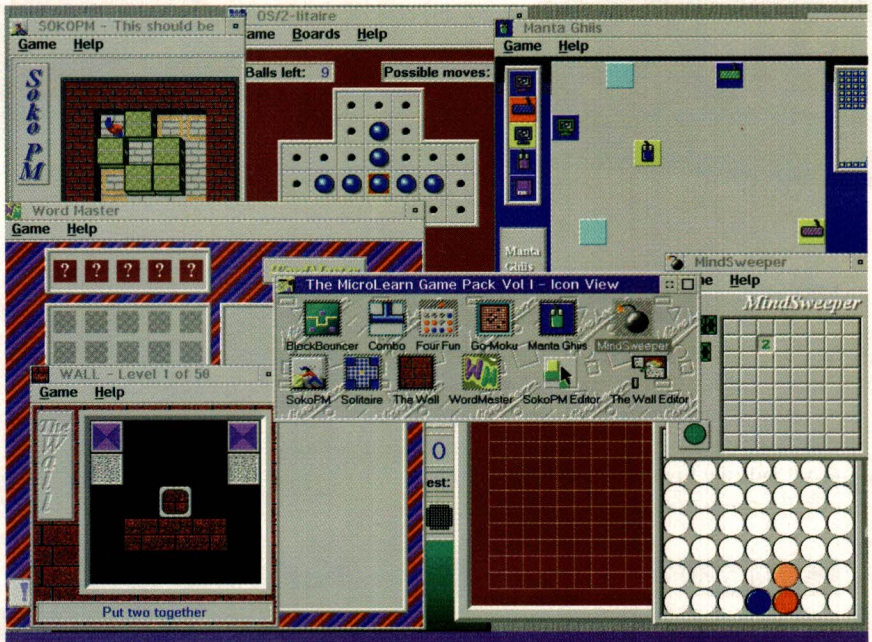

Figure 3: MicroLearn Game Pack.

months and still not see everything.

The only complaints I have with the game are with the management of spaceships. The fact that ships can only be moved one at a time and can only be repaired at their home planet complicates matters—especially towards the end of the game. Other problems include only being able to give "dumb" orders to your ships (for example, you can only specify exact coordinates to go to) so that intercepting an enemy ship is often much harder than it should be.

These minor criticisms aside, I continue to enjoy Galactic Civilizations. This game will give the microcomputing world a chance to see the potential of OS/2 as a gaming platform, and should encourage other game makers to support or exploit OS/2.

SimCity Classic for OS/2

This venerable DOS, Windows, UNIX, and Macintosh game, puts you in charge of a city simulator. As Mayor of a city (well, at first, a large open field), it's your job is to grow and maintain it by building roads and rail lines; creating business, industrial, and residential zones; and constructing municipal services. Sound easy? It's not, because your SimCity is inhabited by fickle residents and business owners who will flee if your tax rates are too high, if the quality of life suffers, or if you forget to build a new sports arena. The original SimCity was from Maxis, ported to OS/2 and marketed by Dux Software. This version is actually a port of the UNIX version of SimCity.

Like your simulated city's new railway, SimCity Classic for OS/2 isn't perfect at maximizing your OS/2 PC's resources. For example, SimCity Classic was a good opportunity to exploit OS/2's multitasking abilities. Part of the joy and the strategy of SimCity is seeing the town you build move around and grow unattended, which allows you to set general policies and give the SimCity residents plenty of time to react. In practical terms, I thought that I could leave SimCity Classic running on a small portion of my desktop all day long, and popping over to view and fine-tune it every few hours.

Forget *that*, if you want your other applications to perform: SimCity for OS/2 quickly balloons up upon launching to grab a healthy chunk of RAM out of your system. While 8MB RAM is listed on the box as a minimum, 16MB is recommended, and with good reason: The *readme* file explains that, due to the bitmap resources consumed, on smaller systems OS/2 will swap out the OS code necessary to process some of the data it's loading, resulting in poor performance.

SimCity also suffers from hardware limitations. To hear both digitized sound and music at the same time you'll need a 16-bit or better SoundBlaster, because these sound boards are the only ones that support SimCity Classic's sound protocol. Other sound

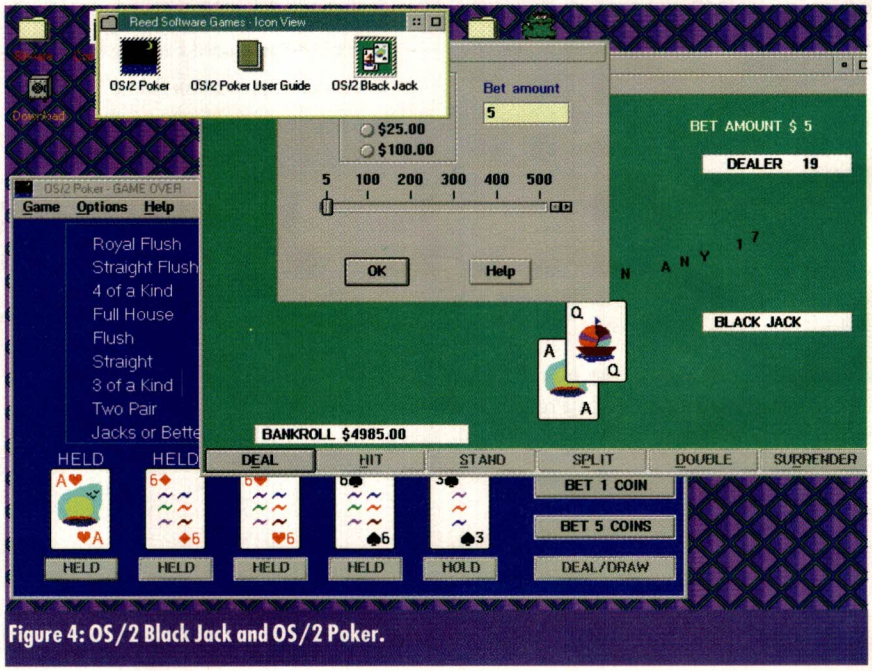

Figure 4: OS/2 Black Jack and OS/2 Poker.

boards can play either the sound or music, but not both at the same time.

That's not all. SimCity Classic is also finicky about graphics boards. If you're unlucky, the game's moving objects are surrounded by black boxes. Why? Some graphics boards don't support a certain function that Dux uses to allow the areas surrounding these objects to be transparent. In an informal survey of the graphics boards at my disposal (which included Matrox MGA, ATI Mach 64, and S3 805 chipsets) only the OS/2 2.11 Cirrus Logic 542x drivers supported this function, and thus worked properly.

While neither of these flaws are fatal (the game's logic still works properly), they will detract from the overall enjoyment. I was disappointed to find that neither the manual nor the *readme* file referred to these problems. Hopefully, either Dux or IBM (since this seems to be a driver inconsistency) will address these issues soon, so that everyone can enjoy this game.

If you've never played SimCity before, you'll quickly find out how it became one of the best selling games of all time. The 14 cities and six scenarios included with the game (and you can create your own) are more than enough

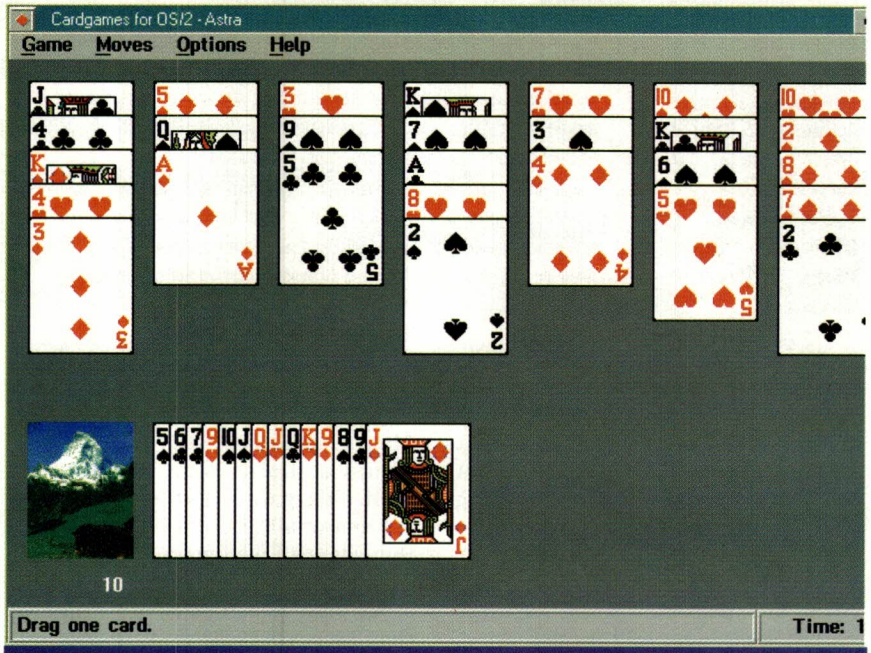

Figure 5: CardGames for OS/2.

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Table 1: Games worth downloading.

Aquanaut 1.0a ($10)	A very fast shareware version of the venerable arcade game "Defender," complete with digital sound and music.
Bingo/2 1.0 (Free)	A talking version of Bingo from IBM's Employee Written Software program.
Bummer 2.0 ($5)	A Workplace Shell version of Parker Brother's board game "Sorry," complete with sound.
Columns 1.2 (Free)	Another variation of "Tetris," where you match colors instead of shapes.
HeliRescue 2.1 ($15)	Rescue the hostages by flying a helicopter past various enemies. It's similar to the Apple II game "Choplifter."
Pyramid Solitaire 1.0 (Free)	Another solitaire game where cards removed must add to 13.
Roids 2.3 ($6)	A slick action game based on the arcade classic "Asteroids." MMPM/2 sound is well integrated.
SeaHaven Towers 2.1 ($15)	A solitaire game similar to the Macintosh game of the same name. It's also known as "FreeCell" on the Windows platform.
Tritris ($20)	A three-dimensional version of "Tetris," similar to the commercial game "Welltris."
VPoker 1.0 (Free)	A talking version of Poker from IBM's Employee Written Software program.

to plunge you into the joys of simulated urban management, and don't be surprised if, after five hours in front of the computer, your biggest complaint is that the handy industrial park that you zoned near the airport isn't taking off like you'd hoped.

TIME KILLERS

The next category of games are more casual: While you might have hours worth of enjoyment from each game, the actual game play will probably be broken in small segments. These are the sorts of games you might play waiting for that long download to finish, or while waiting for the database to be reindexed. That's the beauty of multitasking. None of these products have MMPM/2-hosted sound support, but all are Presentation Manager programs that play in an OS/2 Workplace Shell window.

Game Pack

MicroLearn's collection of 10 puzzle games contains some of the most addicting games I've encountered. While not all of them blew me away, they were all well-written and loaded with options. In particular, the Wall and SokoPM games (which include their own level editors) kept me quite amused and would have been worth the price of the package alone.

The Game Pack had a subtle feeling of quality that the made the games more enjoyable. For example, the installation program offers the friendly advice "Go do something else while this is installing," and the program even sets up a special folder decorated with the company's logo. Why don't more vendors go this extra mile?

OS/2 Black Jack and OS/2 Poker

Reed Software has been developing commercial OS/2 games since OS/2 1.3, but they haven't kept up with the times. OS/2 Black Jack and Video Poker don't offer digital sound, and their Spartan graphics wouldn't be considered commercially viable on any other mainstream platform.

There's only so much that you can do with a stand-alone Black Jack game, and Reed Software pushes to the limit. You can choose how many decks you want the dealer to use, how often to shuffle, and even whether the dealer stands on a hard 17. You can even order an electronic bar drink, which is sipped slowly over time.

I saw a television report discussing how some people dump their whole paychecks into video poker machines. OS/2 Poker is a less expensive alternative. Patterned after the video poker machines found everywhere in Las Vegas, OS/2 Poker even has a little coin slot on the side of the main window for that genuine "at the casino" feeling. The interface is straightforward: You can have the internal PC speaker make bleeping sounds, give yourself more credits if you're having a bad night, and select color schemes named after famous gambling sites.

Cards Games for OS/2

Shareware distributor BMT Micro has released a registered version of the shareware game originally known as FM Cards (named for software author Felix Maschek). This game contains eight variations on the traditional Klondike solitaire game. The simple interface is well-designed; I particularly liked the single-click interface that

Playing with Shareware

The release of OS/2 Warp 3.0, marketed to consumers, has inspired a number of new native OS/2 shareware games. As with most shareware software, the quality of these games vary from simply terrible to those comparable to the commercial offerings in this small, but growing, market.

Most shareware (and freeware) games can be found in "all of the usual suspects." If you're using a commercial service, check the Fun and Games library in the CompuServe's OS2USER forum, or the games library in America Online's OS/2 section. Using the Internet? You can download quite a few games via ftp from the */pub/os2/games* directory at *hobbes.nmsu.edu*, and from the */pub/os2/32bit/games* directory of *ftp.cdrom.com*.

If you're not on line, or if you find ftp too limiting, the best bet is a shareware CD-ROM collection. The most familiar disc is Walnut Creek's Hobbes archive CD-ROM from Walnut Creek, which contains many shareware games. A unique product from Accurate Research, called OS/2 Playmate, actually allows you to sample selected shareware games directly from the CD-ROM, without having to install them onto your hard drive. Both these CD-ROMs are due to be refreshed in the near future; the games listed here are on the newest version.

Table 1 shows some of the newer games that I have sampled, and have found worth the download time. If you find yourself using a shareware game regularly, please pay the modest fee to the author; not only will you often receive extra levels to increase your game-playing pleasure, but you'll also encourage the development of future games.

put cards where they belonged. (It was also a great way to find a move if you're not a very experienced solitaire player.) I found that the Klondike variations made this product more interesting to play, once I tired of my original favorite.

Trickle Down

The object of this game is to line up four chips dropped into a vertical playing field, similar to Milton Bradley's Connect Four board game—while the computer tries to do likewise, and cheerfully blocks your moves. Billed as "the game with attitude," Trickle Down uses a technique called "weak" artificial intelligence which can actually learn as you play against it. Unfortunately, what promises to be an unusual gaming experience becomes more of an academic exercise due to MultiGrain Software's choice of game to waste this AI technique on.

While Trickle Down is an interesting game, it doesn't seem to offer the quantity of game options and variations expected in a stand-alone game. And since MicroLearn's Game Pack, for example, contains the exact same game, minus the weak AI, with more options and nicer graphics, Trickle Down is recommended for Weak AI fans and people training for Connect Four competitions only.

THE FUTURE

In early 1995, it's obvious that the slow-but-steady trickle of OS/2 games will continue to provide new offerings. By the time you read this article, the second version of the MicroLearn Game Pack might be finished, as well as Shipyards, the first add-on for Galactic Civilizations.

It's too early to tell whether or not the OS/2 game market will ever exploit OS/2's incredible game-playing potential,

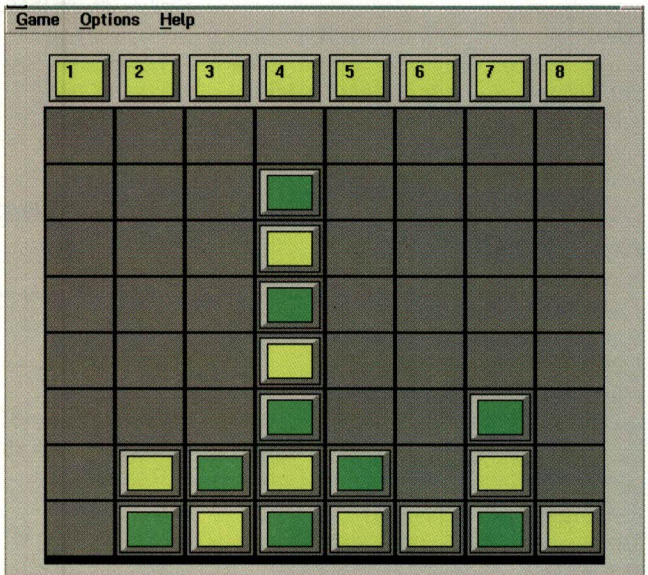

Figure 6: Trickle Down.

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but one thing is certain. As long as OS/2 exists, developers will write games to play on it.

Alexander Antoniades is the Associate Editor of OS/2 Magazine, and a game enthusiast who helped launch Miller Freeman's Game Developer magazine. He can be reached at CompuServe 71154,676, or Internet aantoniades@mfi.com.

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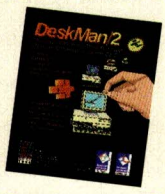

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NetWare, Part Deux.11

The latest NetWare Client drivers for OS/2 Warp

by Bob Panza

OS/2 took another big step in its evolution towards perfection with the release of OS/2 Warp 3.0. The NetWare Client for OS/2 again quickly followed suit with the first OS/2 Warp-compatible version, 2.11. The new version of the NetWare Client resembles version 2.01 in many respects, but also includes significant enhancements.

Version 2.01 was discussed in several previous articles. Today, we'll talk about the features offered by version 2.11 as well as major differences between the two versions. We'll also touch on NetWare Client 2.10, when relevant to understanding changes that have taken place over time.

Team player

The NetWare Client 2.11 is backward-compatible with OS/2 2.x. It cannot be used with OS/2 1.3, which requires the NetWare Requester 1.3, preferably with Novell Service Diskette (NSD) 004 applied. At this stage of the game, version 1.3 seems like ancient history, although it is still running at some user sites (particularly on specialized backends). Besides offering OS/2 Warp support, NetWare Client 2.11:

- Provides more robust Microsoft Windows application support.
- Runs the NetWare Administrator GUI utility in a private Windows session.
- Supports Remote Boot (RPL).
- Provides better private and global DOS and Windows support.
- Renders IPX/SPX support for enhanced-mode Windows applications.
- Accesses as many as nine parallel ports.
- Contains automated ODINSUP setup functions that work well.
- Has expanded menu selections that facilitate a broader range of configuration options.
- Includes documentation in native OS/2 format that will run with the OS/2 *.ipf* facility.

The NetWare Client for OS/2 permits numerous concurrent OS/2, DOS, and Windows sessions. Possible session types are OS/2, private virtual DOS, global virtual DOS, private virtual Windows, global Virtual Windows, VM Boot private sessions initializing from a real DOS kernel and running NetWare 4.x VLMs for DOS or Windows, and VM Boot global sessions initializing from a real DOS kernel and running NetWare 3.11-compliant VSHELL and NETX. The last two session types have evolved in their presence since version 2.01. A working VLM Boot image and icon are easily created with a new menu bar option.

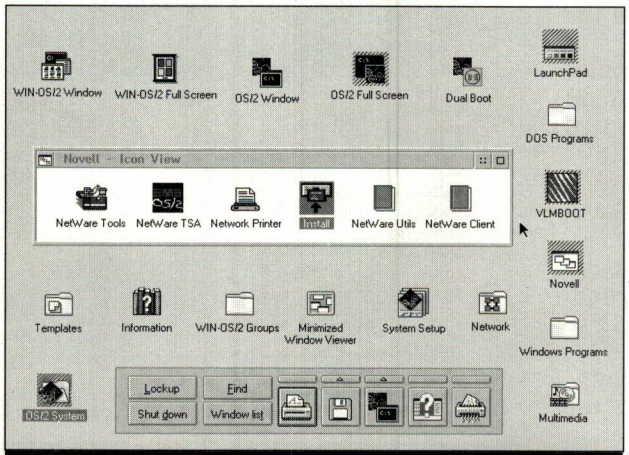

Figure 1: An open Novell folder on the OS/2 Warp Desktop. Notice the blazing VM Boot icon to the right of the open Novell folder; the icon leads to a full-screen session running Novell's DOS 7. DOS can also be run in VM Boot.

NetWare Client for OS/2 is compatible with both NetWare 4.x and 3.1x file-server architectures. In addition, the usual interoperability options and combinations are supported, encompassing Open Data Link Interface (ODI) and Network Driver Interface Specification (NDIS) via Novell's ODI to NDIS (ODINSUP) stub, IBM's LAN Support (LANSUP) interface, and IBM's ODI to NDIS (ODI2NDI) driver. Multiprotocol interoperability between IBM and Novell offerings cover all of the protocol bases.

New files

Procurement of the NetWare Client for OS/2 files is easier

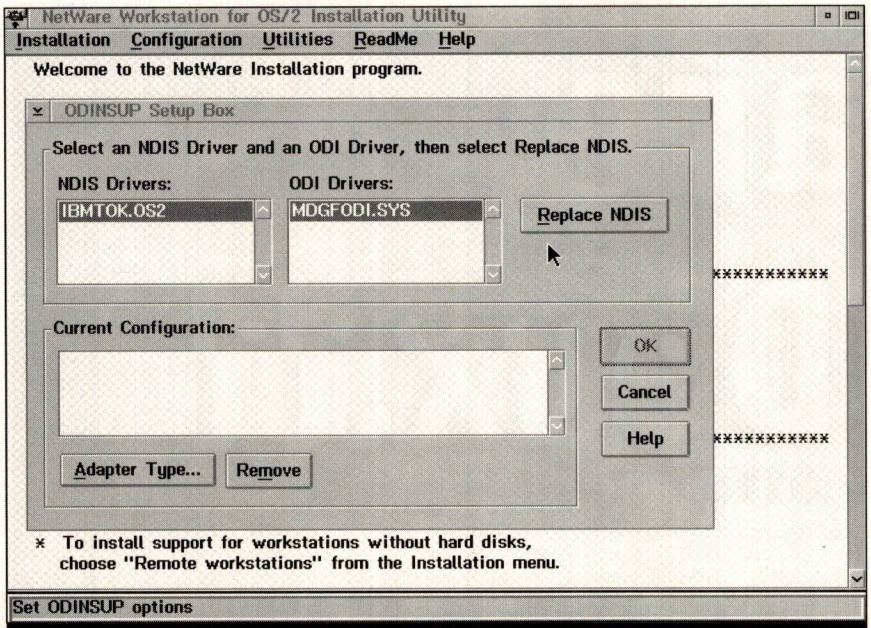

Figure 2: In this example, ODINSUP setup will be used to replace the IBM NDIS MAC driver for an IBM Token-Ring adapter (ibmtok.os2) with a Madge ODI FDDI adapter driver (mdgfodi.sys). After the change is made, it can be removed by clicking on Remove below the Current Configuration panel. After removal, the node reverts back to the original NDIS driver and configuration.

Installation and configuration

The NetWare Client installation and configuration steps have evolved slightly from version 2.01. After the INSTALL program is launched, the NetWare Client is still initially installed or updated with a new version through **Requester on Workstation...** under **Installation** on the main menu bar.

While the installation process is close to that shown in the flowchart described in Table 2 of "NetWare Made Easy" (*OS/2 Magazine*, February 1994, p. 40) some differences are apparent. Three supplementary panels have been added between Step 2, Choose NetWare Support for DOS and Windows Applications and Step 3, Choose Optional Protocols. The first panel suggests default settings for *autoexec.bat* with *tbmi2.com* and *netx.exe* selected for initialization. After the *autoexec.bat* entry decisions are made, a smaller panel gives the user an opportunity to make the entries in another file as well (for other DOS sessions). Next, another smallish panel reminds the user to set the variable **DOS_LASTDRIVE = .**

Between floppies WSOS2_1 and WSOS2_2, when the NetWare Client files are being copied to the target subdirectory, the NetWare 4.x *netware.drv* driver will be replaced with a NetWare

than ever via Internet access to Novell's World Wide Web server (*http://www.novell.com*) or ftp/gopher server (*gopher://gopher.novell.com*). An alternative way of getting the files is "good old" NetWire on CompuServe. The NetWare Client for OS/2 product comes as part of Novell file server packages and may also be purchased alone as separate site-licensed software. One copy of NetWare Client for OS/2 yields a site license, so the cost is relatively minimal. Updates and fixes are best obtained over the Internet or via NetWire.

The NetWare Client 2.01 download consisted of three compressed files, and version 2.10 had five compressed downloadable files. Version 2.11's download now consists of seven compressed files: *wsos21.exe*, *wsos22.exe*, *wsos23.exe*, *wsdrv1.exe*, *os2ut1.exe*, *os2dc1.exe*, and *os2vmb.exe*. Each file will be used to build seven corresponding floppies: WSOS2_1, WSOS2_2, WSOS2_3, WSDRV_1, OS2UTIL1, OS2DOC_1, and a VLM Boot floppy.

WSOS2_1 holds *install.exe*, the NetWare Client for OS/2 installation program. WSOS2_2 stores requester files. WSOS2_3 contains Windows libraries and Remote Program Load (RPL) components. LAN drivers reside on WSDRV_1. OS2UTIL1 holds NetWare utilities, such as *login.exe*, *map.exe*, *cx.exe*, and so on. OS2DOC_1 provides electronic documentation in OS/2 *.ipf* format. The VLM Boot floppy is a boot image created by a DOS DISKCOPY utility.

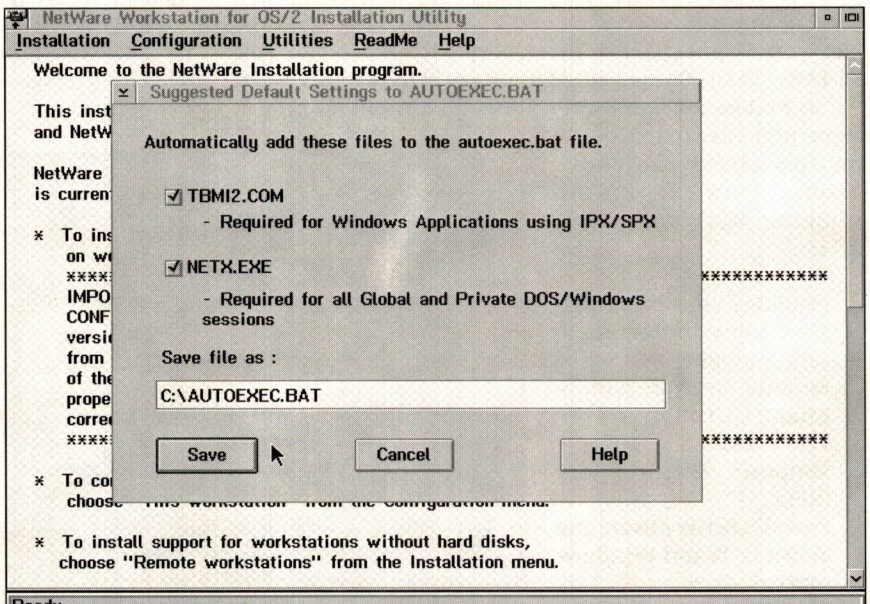
NetWare Workstation for OS/2 Installation Utility
Installation Configuration Utilities ReadMe Help
Welcome to the NetWare Installation program.
Suggested Default Settings to AUTOEXEC.BAT
Automatically add these files to the autoexec.bat file.
TBMI2.COM
- Required for Windows Applications using IPX/SPX
NETX.EXE
- Required for all Global and Private DOS/Windows sessions
Save file as :
C:\AUTOEXEC.BAT
Save
Cancel
Help
* To install support for workstations without hard disks,
choose "Remote workstations" from the Installation menu.
Ready

Figure 3: A new supplementary screen offers to add lines to the autoexec.bat file. The screen appears during the installation process right after NetWare support for DOS and Windows applications is selected.

3.x *netware.drv*. A fourth new supplementary panel appears beforehand to advise the user that this is happening and mentions that the former *netware.drv* has been renamed to *netware.nds*. The panel also recommends restoration of *netware.nds* if the user switches back to run Windows under DOS using NetWare 4.x drivers.

Since the NetWare Client 2.11 fileset uses more floppies than version 2.01, the user is called upon to place more floppies into the source drive during the installation process. One noticeable difference is that the requester files are copied before the drivers rather than vice-versa (as in version 2.01). The end result of the installation also differs from version 2.01 because of the expanded file set and new subdirectories. Additional NLS subdirectories have been added to the path lines, as shown in Fragment 1.

The *config.sys* lines for the NetWare Client remain nearly identical between versions 2.01 and 2.11. Only one new line, **DEVICE = C:\OS2\MDOS\LPTDD.SYS**, was found at the end of the NetWare Requester statements section.

The *net.cfg* options experienced a few alterations. One change was in the **SPX Send Timeout** setting. The default, minimum, and maximum values are now respectively 500, 100, and 6,000 milliseconds. Under **Named Pipes**, a new **Advertise Board** option allows specification of the board that the Named Pipes server will use to advertise itself. A new **Machine Names** option specifies the number of Named Pipes server names that can be cached. This new feature is necessary when the Named Pipes server's network does not have any NetWare file servers on it. The **Service Threads** option is gone.

In the **NETBIOS** section, a **Bind** option specifies the primary Novell

Fragment 1: New NLS Subdirectories

```
LIBPATH=.; C:\OS2\DLL; C:\OS2\MDOS; C:\; C:\OS2\APPS\DLL;
C:\MMOS2\DLL; C:\NETWARE; C:\NETWARE\NLS\ENGLISH; L:\OS2;
P:\OS2;
SET PATH=C:\OS2; C:\OS2\SYSTEM; C:\OS2\INSTALL; C:\;
C:\OS2\MDOS; C:\OS2\APPS; C:\WINDOWS; C:\MMOS2; C:\NETWARE;
L:\OS2; P:\OS2;
SET DPATH=C:\OS2; C:\OS2\SYSTEM; C:\OS2\INSTALL; C:\;
C:\OS2\BITMAP; C:\OS2\MDOS; C:\OS2\APPS; C:\WINDOWS;
C:\MMOS2; C:\MMOS2\INSTALL; C:\NETWARE; C:\NETWARE\NLS;
C:\NETWARE\NLS\ENGLISH; L:\NLS; P:\NLS;
```

The destination directory for installation of the NetWare Client for OS/2 files is *c:\netware*. LIBPATH files are now installed in *c:\netware*, *c:\netware\nls*, and *c:\netware\english*. *c:\netware\nls* and *c:\netware\english* were added to DPATH. Also, *I:\nls* and *p:\nls* subdirectories have been added to the LOGIN (L:) and PUBLIC (P:) drive entries of DPATH. The PATH line, however, remains unchanged between the 2.01 and 2.11 versions of INSTALL.

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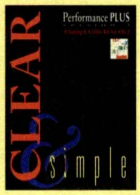

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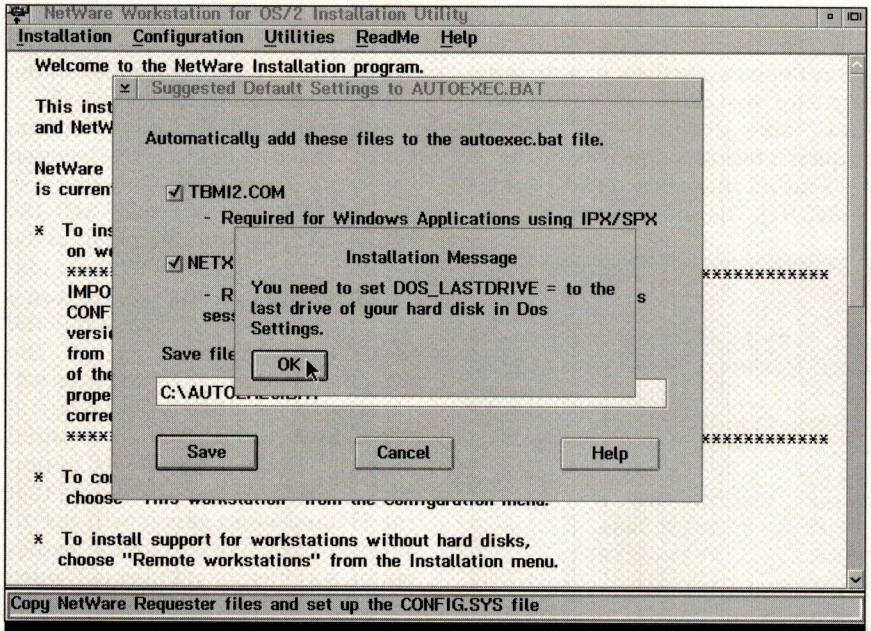
NetWare Workstation for OS/2 Installation Utility
Installation Configuration Utilities ReadMe Help
Welcome to the NetWare Installation program.
Suggested Default Settings to AUTOEXEC.BAT
Automatically add these files to the autoexec.bat file.
TBMI2.COM
- Required for Windows Applications using IPX/SPX
Installation Message
You need to set DOS_LASTDRIVE = to the last drive of your hard disk in Dos Settings.
OK
Save
Cancel
Help
* To install support for workstations without hard disks, choose "Remote workstations" from the Installation menu.
Copy NetWare Requester files and set up the CONFIG.SYS file

Figure 4: Before the installation procedure continues, the user is reminded to set the DOS_LASTDRIVE = variable.

NetBIOS board in the OS/2 node. Within **Netware Requester**, a **Default Login Drive** enables the user to map **SYS:LOGIN** to a drive other than *L:* upon initial connection to a NetWare file server prior to login. Meanwhile, two **Netware Requester** options disappeared: **Nondedicated Server** and **Directory Services Off. Display Hard Errors** has become a **Netware Requester** option. Under **Netware For OS/2**, defaults for **Performance Tuning** changed from 7 to 9, further favoring the non-dedicated NetWare Server over the NetWare Client on the OS/2 platform. Also, the default for **Server Memory** was reduced from 8MB to 6MB.

Menu options

Menu options were changed and expanded between NetWare Client 2.01 and 2.11. More configuration possibilities are covered. **Installation...** has five selections below it, increased from four under version 2.01. NetWare Client picks are now twofold: **Requester on workstation...** and **Remote workstations...** The **NSD on workstation...** was eliminated. Three options are available for NetWare Server for OS/2; those options appear shaded in light gray indicating that they remain inactive for the NetWare Client.

Configuration contains a **VLM Boot Setup...** selection that helps build a DOS kernel running on an OS/2 workstation. This configuration allows the user to run NetWare 4.x VLMs. The VLMs facilitate the NetWare Administrator GUI and NetWare Directory Services (NDS) access to NetWare 4.x servers in private Windows sessions. **ODINSUP Setup...** under Utilities enables the user to automatically switch between ODI and NDIS drivers so manual editing of *config.sys* and *net.cfg* are not required. Lastly, **Readme** was expanded to two selections: **Requester** and **NetWare Server for OS/2**. Help remains the same. All of the menu selections in version 2.11 were also in version 2.10 with the exception of **VLM Boot Setup...**

Patches

A *r211ft.exe* patch contains the latest field test patches as of this writing and is available from World-Wide Web or fTP/Gopher servers. The patch now pertains only to NetWare Client files and excludes any patches for OS/2 server-based utilities. Numerous problems and bugs are remedied, a few of which are:

- Delayed shutdown if a network connection was lost.
- Poor performance when loading DOS or Windows applications from a NetWare server.
- *Install.exe* could not identify different versions of OS/2 (version 2.x or 3.x, "full pack" or "for Windows").

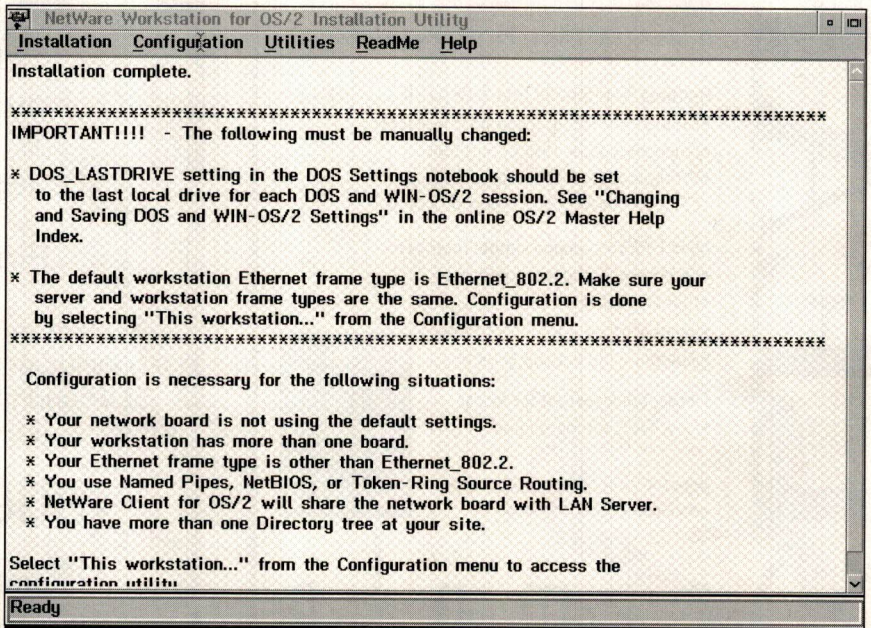
NetWare Workstation for OS/2 Installation Utility
Installation Configuration Utilities ReadMe Help
Installation complete.
IMPORTANT!!!! - The following must be manually changed:
* DOS_LASTDRIVE setting in the DOS Settings notebook should be set to the last local drive for each DOS and WIN-OS/2 session. See "Changing and Saving DOS and WIN-OS/2 Settings" in the online OS/2 Master Help Index.
* The default workstation Ethernet frame type is Ethernet_802.2. Make sure your server and workstation frame types are the same. Configuration is done by selecting "This workstation..." from the Configuration menu.
Configuration is necessary for the following situations:
* Your network board is not using the default settings.
* Your workstation has more than one board.
* Your Ethernet frame type is other than Ethernet_802.2.
* You use Named Pipes, NetBIOS, or Token-Ring Source Routing.
* NetWare Client for OS/2 will share the network board with LAN Server.
* You have more than one Directory tree at your site.
Select "This workstation..." from the Configuration menu to access the
Ready

Figure 5: Once the installation is complete, INSTALL advises the user on reasons for additional configuration.

- *Route.sys* did not route Token-Ring_SNAP frames, causing TCP/IP failures in a Token-Ring source routing environment.
- The Shared attribute was erroneously assigned to files newly created on a NetWare file server by the NetWare Client for OS/2 node.
- A file save while running IBM Works generated a TRAP 00D.
- *Netbios.sys* created excessive network traffic due to insufficient timeout values.
- Running *login.exe* from *config.sys* caused OS/2 Warp 3.0 machines to hang.
- In some situations, if VSHELL failed to create a connection, the primary connection would also be terminated

R211ft.exe and the preceding *r210ft.exe* downloads resolved numerous bugs in *spx.sys*, *mini.ifs*, *netx.exe*, *vipx.sys*, *nwifs.ifs*, *nwreq.sys*, *route.sys*, *nmpipe .sys*, *vshell.sys*, *dosvipx.sys*, *install.exe*, *netbios.sys*, *nwstart.exe*, *nwtools.exe*, *nwdaemon.exe*, *nwipxspx.dll*, and *nwworker.dll*. Some of the files were changed in both fixes. Since the NSD installation option was eliminated from the INSTALL program, a different procedure must be used to apply the new files. A subdirectory called *install$.new* is created below *\netware*. All of the files are copied into *install$ .new* and then the user reboots the NetWare Client for OS/2 node to trigger an "automatic" application of the new files. A couple of files might have to be copied to other subdirectories, such as *nwipxspx.dll* to *c:\os2 \mdos \winos2\system* and *mini.ifs* to *sys:rpl2*.

Updated server utilities for the NetWare Client 2.11 are available in *os2utp.exe* for NetWare 3.12 and 4.x. A Presentation Manager (PM) version of NetWare's remote file server console utility is included. The utility patches and fixes address problems with *remocon.exe, send.exe, login.exe, ncopy.exe, nprint.exe, syscon.exe*, and *capture.exe*. Related *.dll*, *.hlp*, *.dos*, and *.msg* files are also replaced. The patched fileset numbers 18 files, excluding *.txt* text files. Some of the files apply to NetWare 4.x, but most of the files pertain only to NetWare 3.12.

Installation of the fixes simply involves copying the files to the respective *sys:public\os2* or *sys:login\os2* directories. Refer to *os2utp.txt* for details. NetWare 3.11 users should instead look at *os2uta.exe* and *os2utb.exe* for updated OS/2 utility files.

Wrapping it up

Novell's NetWare Client for OS/2 seems to have nearly unlimited capacity to evolve alongside the OS/2 platform. For the most part, interoperability options were exhausted throughout the past evolution. Bugs and fixes continue to haunt OS/2-based NetWare like the ghosts of versions past and present. A forthcoming LAN version of OS/2, called OS/2 Warp Connect, promises additional excitement—hopeful of new features, rather than new bugs and fixes.

Bob Panza is a LAN consultant affiliated with EJR Computer Associates in Hoboken, N.J., and The Systems Expert in Woodbury, Conn. He can be reached as 71611 .1262@compuserve.com.

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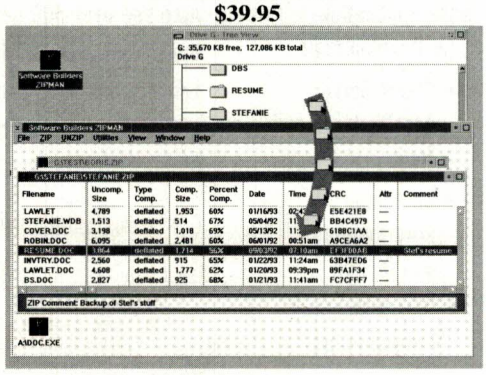

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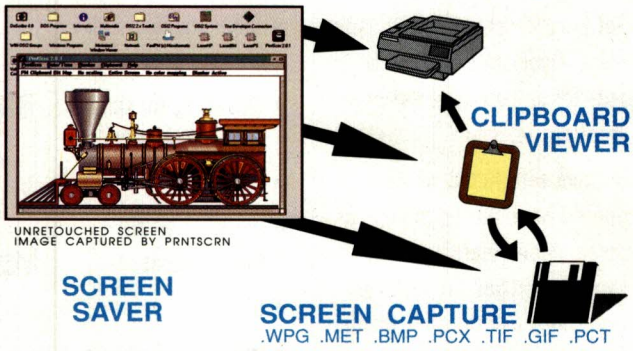

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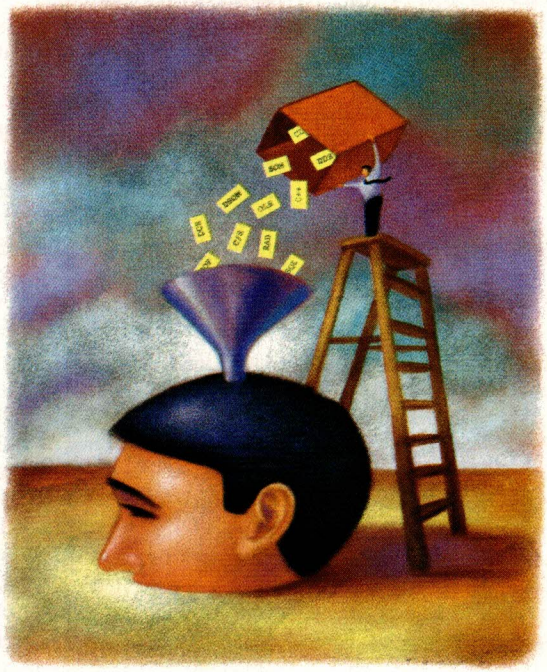

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The Esther Utilities 2.0

Tools You Shouldn't Live Without. BY ESTHER SCHINDLER

Last year, in "The Esther Utilities" (*OS/2 Magazine*, April 1994, p. 50), I described software that would never be deleted from my OS/2 PC, no matter how tight I got on disk space. This year, I'll revisit last years' choices and tell you about my new "must have" utilities.

FontFolder

The most significant addition to my digital tool box is Cliff Cullum's shareware FontFolder. As you have probably discovered by now, "awkward" is the kindest term to describe OS/2's method of adding fonts to your system. FontFolder is a font-management system that makes it easy to add, delete, and work with the fonts you own.

When you install FontFolder, you register your fonts with the program. Once registered, the font can be loaded and unloaded with a point and a click. Since OS/2 makes fonts automatically available to applications, you can get into the habit of keeping only necessary fonts loaded. That helps system performance, but it's the convenience factor I appreciate most.

You can save groups of fonts into named collections called FontPacks. You can load and reload FontPacks as a single item, and all the fonts in the collection will be added or deleted at once. I use this mostly to organize all my weird headline fonts, but it has dozens of uses. For example, save the fonts that you use for a monthly newsletter in a Newsletter FontPack, and delete them during the weeks when you've laid aside your newsletter duties.

Another FontFolder benefit is that you can store fonts wherever you want. OS/2 prefers to keep all fonts in the boot directory's *\psfonts* directory, which wouldn't be cumbersome if I had thought to allocate enough disk space for the number of fonts I've acquired.

FontFolder supports fonts stored on disk or CD-ROM. I've also created several files that contain preregistered FontPacks. If you own the Bitstream 500 Font CD-ROM, for instance, you don't have to go through the somewhat time-consuming process of registering the fonts manually.

The current release of FontFolder won't do some things. It won't manage fonts in Windows or Win-OS/2; you must still interact with the Adobe Type Manager program. It doesn't print a sample of each of the fonts in your system. Nonetheless, it is a wonderful utility. If I had to work on a computer without FontFolder installed, I would feel as if I had a hand tied behind my back.

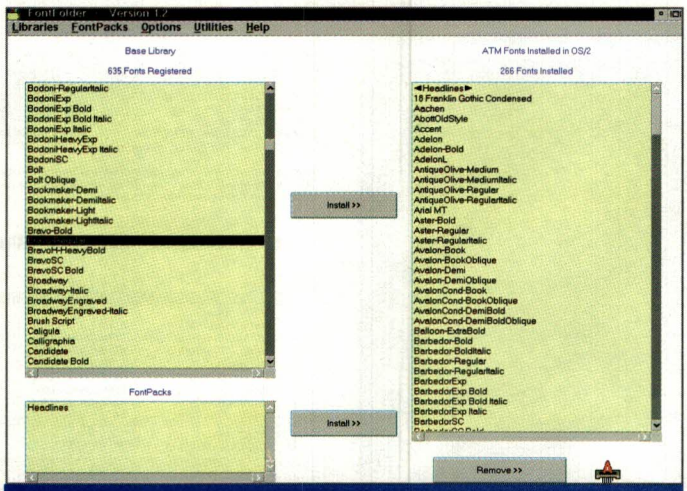

Figure 1: FontFolder makes it incredibly easy to install and manage fonts in OS/2.

The Graham Utilities

If you ever talk with software reviewers, don't ask about the packages they just evaluated. The answer you get doesn't mean much, since even the most cynical of us can find something nice to say about any package. Instead, ask which applications remain on the reviewer's hard disk.

In that reviewer's triage, The Graham Utilities found a comfortable spot on my hard disk and settled in for a long stay. The Graham Utilities were reviewed in *OS/2 Magazine* in October 1994 (p. 42) , so I won't devote a lot of text to them here. If you somehow missed the review, however, it's a suite of utilities roughly equal to early versions of The Norton Utilities.

Chris Graham has added some features to the package since I last wrote about it (including an HPFS undelete program and enhanced HPFS file-defragmentation utilities), but the tool I use daily is the simple file finder. If I know that I saved that bitmap somewhere on the *d:* drive, I don't want to go through the process of starting up OS/2's Seek and

Scan, or even GammaTech's search utility, efficient as they are. Since I usually have a command line open somewhere on the desktop, typing **FF *.BMP** is the most straightforward and fastest way for me to find what I want.

I use the other utilities sporadically, too, on an as-needed basis. The Graham Utilities has lived up to its promise as a collection of small programs that make using my computer easier.

PMJPEG

I have a half dozen graphics-processing programs, most of them native OS/2 applications. I can scan, manipulate, and modify images, not to mention fold, spindle, and mutilate. However, when I download an interesting graphic file from CompuServe and want a peek, it's PMJPEG that I click on first. PMJPEG is a shareware graphic viewer with image-processing and conversion capabilities, and at $20 it's one of the best bargains on the block.

You can export an image to JPEG, GIF, TIFF, Targa, PCX, or BMP image formats. PMJPEG lets you print images and make simple modifications such as image rotation, cropping, and saturation and brightness adjustments. You can even create a slide show of images.

KWQ

I dial into several BBSes regularly, some of them long distance. To use them efficiently, I need an off-line reader to decode message files. KWQ, written by Kurt Westerfield, has become an indispensible part of my system.

KWQ, like other off-line readers, is a communication utility on the fine line between "application" and "utility." (An off-line reader lets you read and compose responses to messages while the modem's not connected, to reduce your connect time and, thus, your phone bill.) I use a communication program to access the BBS, tell it which topics I want to investigate, and initialize a download sequence to get the mail. Afterward, I use KWQ to read the mail file, reply to messages, and

The Bill Utilities

Not everyone works the same way. People's preferences and priorities vary, so their choice of favorite utilities will differ. I don't have to go far to see an entirely different set—just into the next room, where my business partner (and husband) writes OS/2 code and communes with his own OS/2 system. While we share many utility preferences, Bill likes and uses some applications that never grabbed me.

If you have any problem with OS/2 communications, the first advice an OS/2 user will give you is "Get SIO." Ray Gwinn's **SIO drivers**, arguably the most popular OS/2 shareware package, replace the OS/2 device driver *com.sys*, much as 40S2 replaces *cmd.exe*. SIO enables faster—much faster—access to serial ports, and can speed up communications activities considerably.

Bill and I arrange our desktops very differently. I sort my frequently-used applications across the top of my screen, but Bill likes to line up his objects on the right. The **Extended Desktop** (EXTDESK) extends the function of the OS/2 Desktop object. Using EXTDESK, you can optionally remove Arrange and Sort from the Desktop context menu. You can align groups of icons on the Desktop vertically or horizontally. Snap-to-Grid precisely positions individual icons. Best of all, it's free IBM Employee Written Software (EWS).

Bill has become a devotee of Binar Graphics' **Skyscraper** (reviewed in *OS/2 Magazine*, October 1994, page 17), which creates separate virtual desktops and makes it easy to launch programs. When he's programming, Bill will have several desktops open at once: the help file for a compiler in one desktop, the program editor in another, a command-line session in another, a word processor in another...well, you get the idea.

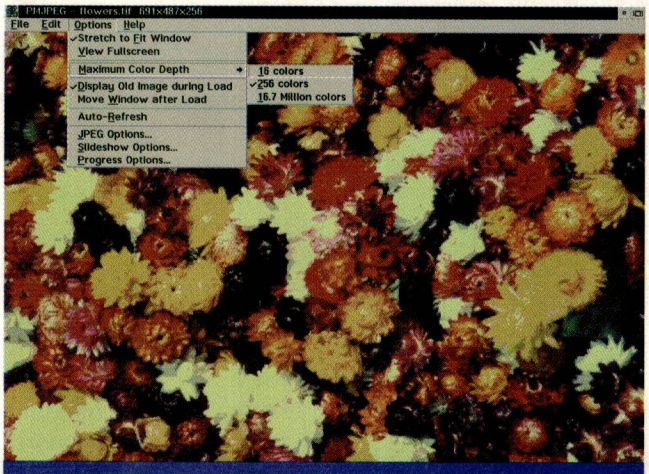

Figure 2: PMJPEG displays graphic files and lets you make some simple manipulations to them.

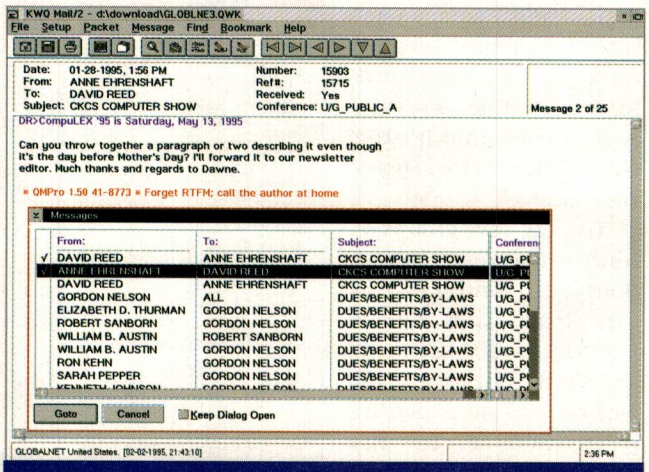
KWQ Mail/2 - d:\download\GLOBLNE3.QWK
File Setup Packet Message Find Bookmark Help
Date: 01-28-1995, 1:56 PM
From: ANNE EHRENSHAFT
To: DAVID REED
Subject: CKCS COMPUTER SHOW
Number: 15903
Ref#: 15715
Received: Yes
Conference: U/G_PUBLIC_A
Message 2 of 25
DR>CompuLEX '95 is Saturday, May 13, 1995
Can you throw together a paragraph or two describing it even though it's the day before Mother's Day? I'll forward it to our newsletter editor. Much thanks and regards to Dawne.
* QMPro 1.50 41-8773 * Forget RTFM; call the author at home
Messages
From: To: Subject:
DAVID REED ANNE EHRENSHAFT CKCS COMPUTER SHOW
ANNE EHRENSHAFT DAVID REED CKCS COMPUTER SHOW
DAVID REED ANNE EHRENSHAFT CKCS COMPUTER SHOW
GORDON NELSON ALL DUES/BENEFITS/BY-LAWS
ELIZABETH D. THURMAN GORDON NELSON DUES/BENEFITS/BY-LAWS
ROBERT SANBORN GORDON NELSON DUES/BENEFITS/BY-LAWS
WILLIAM B. AUSTIN ROBERT SANBORN DUES/BENEFITS/BY-LAWS
WILLIAM B. AUSTIN GORDON NELSON DUES/BENEFITS/BY-LAWS
RON KEHN GORDON NELSON DUES/BENEFITS/BY-LAWS
SARAH PEPPER GORDON NELSON DUES/BENEFITS/BY-LAWS
Goto Cancel Keep Dialog Open
GLOBALNET United States. [02-02-1995, 21:43:10]
2:36 PM

Figure 3: KWQ is an OS/2 off-line message reader, which lets you read and respond to BBS messages.

A year later...

Last year, I described several utilities I said I could not live without. Do I still feel the same way about those packages? Where are they now? Each of the three primary utilities that I described as "essential" have been updated. All are still on my desktop. JP Software's **4OS2** is up to version 2.5, and is still indispensible. New features include better REXX integration, more options in the LIST utility, and many other things that sound small but help your OS/2 system become a more comfortable place to work.

SofTouch Systems' **GammaTech Utilities** is now version 3.0, though I confess I haven't upgraded from the previous version. The GammaTech Utilities remain important to me and aren't leaving my hard disk, but the new features (including a DiskMap Utility, enhanced HPFS support, and a reported 200 other enhancements) haven't given me an uncontrollable urge to pull out my checkbook. Yet.

DeskMan/2, from Development Technologies, is currently at version 1.51a. It supports OS/2 Warp and some of OS/2 Warp's new features, including animated icons. On my desktop, this application never hides out in a folder; it's always right there for easy access.

EnveLogo (a free utility to produce envelopes) and **EABrowse** (which let me examine a file's extended attributes) are still on the hard disk (neither takes up much room), but I doubt I've fired them up in a couple of months. My word processor now makes it easier to print envelopes, especially since we have a new printer with an envelope feeder. EABrowse has been superseded by REXX programs written by the other resident of the Schindler Bit Ranch; it isn't quite as necessary anymore.

Similarly, I haven't needed **System Colors** very often, especially since the OS/2 Warp scheme palette is so much improved; but System Colors remains on my hard disk for a time when I have an irrepressible urge to use a Rugby desktop color scheme.

FlexText, also in a newer release, remains among my primary tools. When I need to print off a text file in a two-up format, I reach for FlexText without a moment's thought.

Last year, I said that **FM/2**, a shareware file-management utility for OS/2, was "so good that it might change my mind about the entire product category." FM/2 is much improved since last year, and it really is good, but I'm afraid that I'm a hopeless command-line addict. File managers just aren't for me. I've tried to get myself to use FM/2, truly I have, but I don't reach for it the way I unthinkingly double-click on the 4OS2 program object. If you have the slightest interest in OS/2 file-management utilities, do check out FM/2, as it may be the best in its class. But this program didn't stay on my desktop all year long.

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prepare my replies for later upload to the BBS.

KWQ has several features that I appreciate. It lets me set bookmarks in the file, so I can swiftly move from one discussion to another. It offers well-designed searching capabilities. It is also nicely integrated with the Workplace Shell, including drag-and-drop and font support.

WHOAMI

We recently installed LAN Server 4.0, and I'm still exploring its capabilities. I found one shareware utility for it, however, that moved into my permanent *\utils* directory after the first try. WHOAMI is a simple command-line utility that identifies the user and reports on the user's default alias and application assignments. Type **WHOAMI /A** and see

```
User ESTHER on AGAVE
Requester Version: 4.00
Logged On To: \\ALOE in VERA
Privilege: User
Password Age: 5 days
Home Directory: M:
7 Aliases Assigned At Logon:
LPT2:  IBM4039
LPT1:  HPLJII
Z:  Z_PBIN
W: WORK
V: VOL1
U: SYS
R: DEV
```

It's simple, useful—and it's staying on my hard disk.

Online Library OS/2 Collection

Another tool that can only vaguely be termed a utility is IBM's Online Library OS/2 Collection. I use this CD-ROM as a reference, since it contains an astonishing amount of technical data about OS/2 (pre-OS/2 Warp). The BookManager/2 tool included is a little clumsy, but it does let you search across hundreds (or is it thousands?) of IBM documents, from the technical "Red Books" to Communication Manager/2 manuals, to white papers about tuning OS/2. The ability to search for the information that I know is "somewhere" is incredibly valuable. I have only one CD-ROM drive, but at any given time, the chances are that the Online Library is the one in the drawer.

The jury's out

I'm experimenting with two utilities that may stick around, but both are new, so it may be too early to tell. Beginning with OS/2 Warp, OS/2 no longer includes a calculator. With a full spreadsheet in the BonusPak (as part of IBM Works), perhaps IBM believed a calculator was unnecessary. However, if you want to add a list of numbers, a spreadsheet is overkill. If you need a calculator, take a look at PolyCalc. Its features are extensive, from separate entry and display modes that ease number conversions, to a comprehensive set of mathematical functions.

Spell Guard is still in beta as of this writing, but it may grow into a must-have utility. Spell Guard interactively checks your spelling, no matter what application you're using. If it detects a spelling error, Spell Guard will momentarily become the active win-

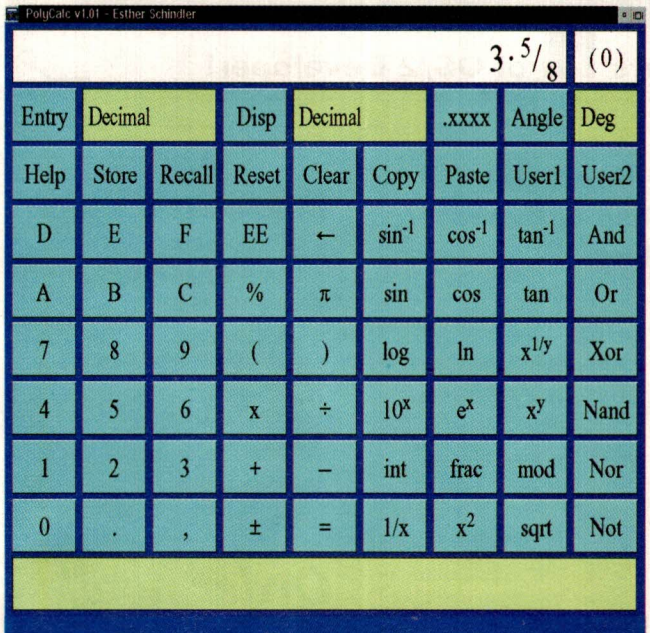
PolyCalc v1.01 - Esther Schindler
3.5/8
(0)
Entry Decimal Disp Decimal .xxxx Angle Deg
Help Store Recall Reset Clear Copy Paste User1 User2
D E F EE ← sin-1 cos-1 tan-1 And
A B C % π sin cos tan Or
7 8 9 ( ) log ln x1/y Xor
4 5 6 x ÷ 10x ex xy Nand
1 2 3 + – int frac mod Nor
0 . , ± = 1/x x2 sqrt Not

Figure 4: PolyCalc has quite a few functions for a small calculator utility.

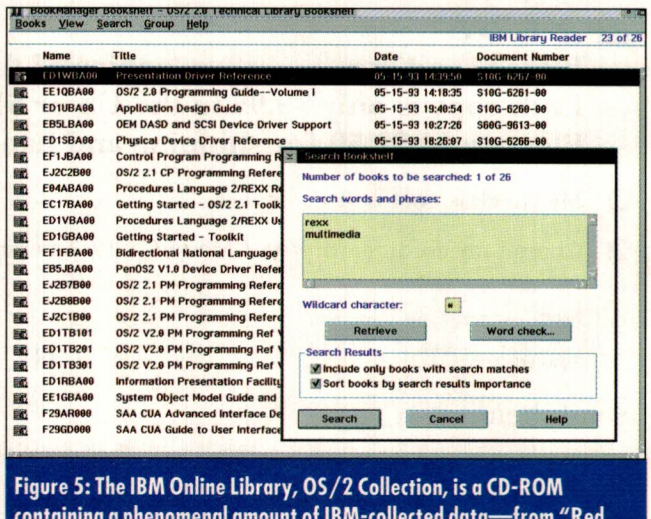

Figure 5: The IBM Online Library, OS/2 Collection, is a CD-ROM containing a phenomenal amount of IBM-collected data—from "Red Books" to white papers.

dow, so that you can make note of the error. If you're in a heads-down writing mode, it's easy to ignore the Spell Guard window entirely; the program's application window disappears into the background if you keep typing. Spell Guard can search for a proper spelling, or you can interactively add the word to the dictionary. There are several options you can set, including a multimedia "vulgarity warning" if you type naughty words.

As I look over the list of utilities I've recommended, I'm heartened by the fact that all of these applications are inexpensive. You could buy all of them without exceeding the petty cash budget; in a business, they might be easy to slip into a purchase order, or (gasp!) bury on your expense account.

OS/2's utility market is strong and healthy. There are plenty of great, useful, can't-live-without-it packages emerging. I look forward to exploring all of them!

Esther Schindler is a computer consultant and writer. She is a contributing editor to OS/2 Magazine, the sysop of the Ziffnet Executives On-line Forum on CompuServe, and coauthor of Teach Yourself REXX in 21 Days, from Sams Publishing. You can contact her at 72241.1417@compuserve.com.

RESOURCES:

Extended Desktop
CompuServe: *exdesk.zip* in OS2USER Library 23, IBM Files
ftp://hobbes.nmsu.edu/os2/ibm/ews/exdesk.zip

FontFolder (Shareware: $20)
Cliff Cullum
11 Lincoln Rd.
Putnam Valley, NY 10579
CompuServe: 75013,1701
CompuServe: *fntf12.zip* in *OS2BVEN* Library 1, OS/2 Shareware
ftp://hobbes.nmsu.edu/os2/32bit/miscutil/fontf11a.zip

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Fairfax, VA 22033
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(Continued on p. 52.)

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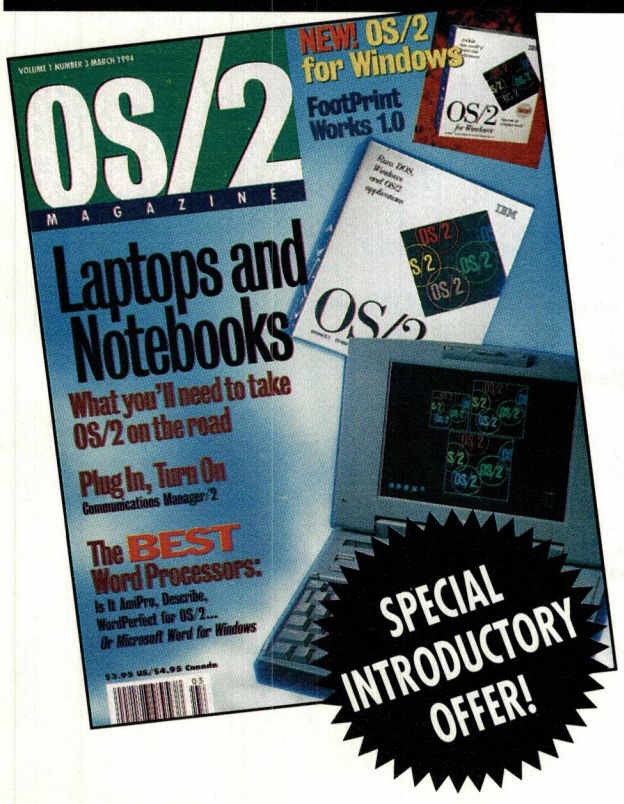
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WHOAMI (Shareware: $50 per site)
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Late-Breaking Developments in the World of OS/2

Just Announced

Xact 3.2

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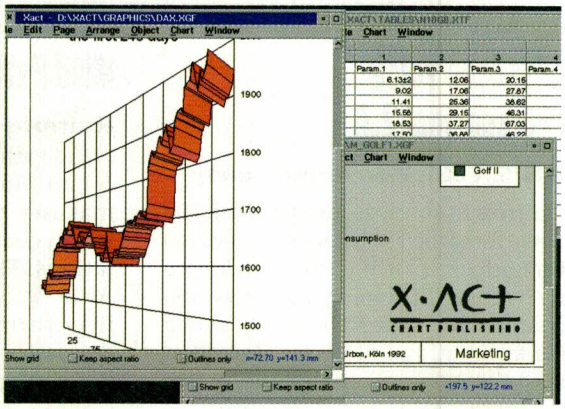

Indelible Blue is announcing the English-language release of SciLab GmbH's graphics and presentation tool, Xact. This program is designed to allow you to manipulate the presentation of data. It doesn't provide any computational power, but it can generate a variety of graphs. This tool is also available on Windows, DOS, and Novell's FlexOS. The standard version of Xact is $398 and a student edition (without REXX support) is available for $198. Call Indelible Blue at (800) 776-8284, (919) 878-9700, or fax (919) 878-7479.

READER SERVICE NO. 165

FlexText 3.0

Better text printing

Extension Software is announcing an update of their text-printing utility, FlexText. This program offers customized control over text-file printing, including a choice of font, line spacing, control characters, margins, and borders. This product also features an unattended mode that allows batch files to access it to generate reports and listings. FlexText 3.0 is available for $39. Call Extension Software at (602) 820-0321.

READER SERVICE NO. 166

NetPM 2.0

LAN Server management aid

Creative Assistance Software is announcing the release of NetPM 2.0. This LAN Server administration tool now includes multi-domain management, statistics logging, LAN configuration and activity reports, group alias and application assignments, and directory space limitation management. NetPM is available for $299, additional licenses are $239, and a site license is $2,000. Call Creative Assistance Software at (704) 544-0001 or fax (704) 543-6366.

READER SERVICE NO. 167

VisPro Reports 1.0

Report writing tool and REXX API

Hockware has released a new report-writing tool, VisPro/Reports. This program offers WYSIWYG reports authoring with object templates, including multi-line text, entry fields, bit-mapped images, and business graphics. A royalty-free runtime allows REXX programs to use VisPro/Reports' report-printing facilities. Data can be queried from DB2/2, EHLLAPI, APPC, and *.dbf* files. VisPro/Reports has a retail price of $199. Call HockWare at (919) 380-0616 or fax (919) 380-0757.

READER SERVICE NO. 168

Dr. Solomon's Anti-Virus 7.0

Fights OS/2 viruses

S&S Software International is releasing an updated version of their OS/2 virus-protection software, Dr. Solomon's Anti-Virus Toolkit. The utilities in this package have a Presentation Manager front end and include an online virus encyclopedia and two virus finders. The Anti-Virus Toolkit, which contains the OS/2, DOS, and Windows versions, is $149 for the standard version that includes quarterly updates for one year. A version that includes monthly updates for one year is $295. Call S&S Software at (714) 470-0048 or fax (714) 470-0018.

READER SERVICE NO. 169

Imagine 128

Imagine faster video

Number Nine Visual technology has released a new graphics card with OS/2 drivers. The card is capable of a maximum resolution of 1600x1200 x256. The maximum color-depth resolution is 1152x864x24. The Imagine 128 has a 128-bit video accelerator and memory interface that allows data to move in 128-bit chunks. The card can hold up to 4MB of VRAM with palette DAC speeds of up to 220 MHz. In addition to the TI Viewpoint chip, which gives the card the high-speed graphics, the card also contains a Cirrus Logic GD5422 for VGA compatibility. The

Just Announced

Late-Breaking Developments in the World of OS/2

price of the Imagine 128 Professional is $899. Call Number Nine at (617) 674-0009, fax (617) 674-2919, or bbs (617) 862-7502.
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DataTable 2.5

Data entry custom control

ProtoView Development is announcing the release of a new data entry custom control for OS/2. This utility features Spreadsheet/Grid Control that can be used to create data-entry fields of as many as 250 columns across and 2 billion rows deep. DataTable 2.5 with Spreadsheet/Grid Control is available for $495. A package that includes source code is $995. Contact ProtoView at (800) 231-8588, (908) 329-8588, or fax (908) 329-8624.
READER SERVICE NO. 171

Advanced Voice Professional 2.0

OS/2 Telephony made easy

Sunrise Systems is announcing the release of their voice-response system that integrates with Dialogic telephony hardware. This program is network-compatible, supports both analog and digital input, and allows customization with the Advanced Information Management (AIM) programming language. Advanced Voice Professional 2.0 is available for $695. Contact Sunrise Systems at (702) 566-6646 or fax (702) 566-5534.
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Mind Path IR55-FX for OS/2

Remote-control hardware

Mind Path Technologies is releasing a hand-held remote-control device that uses special software to allow you to interface with OS/2 during presentations. This device is Infrared Data Association (IRDA)-compatible, has five-channel switching, and features animation on demand. The IR55-FX has a suggested retail price of $229. Contact Mind Path Technologies at (214) 233-9296 or fax (214) 233-9308.
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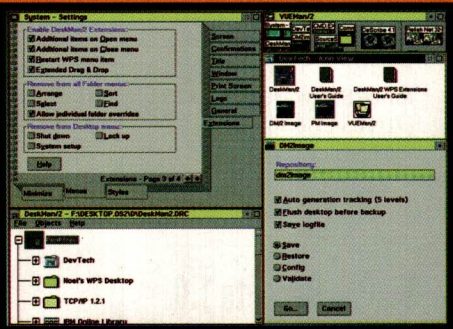

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Reader Service No. 31

Build Your Own LaunchPad

USING REXX TO CUSTOMIZE LAUNCHPAD OBJECTS

BY DICK GORAN

The introduction of the LaunchPad with OS/2 Warp provides OS/2 users with a handy time-saving technique for selecting and launching Workplace Shell objects with a single click. The developers did a much better job designing the LaunchPad than the chroniclers did documenting it, as is typical of so many things in OS/2.

The default LaunchPad is created on the Desktop when you install OS/2. Like all WPS objects, it has a Settings Notebook that allows you to customize the appearance of the LaunchPad on your system as well as the way it is configured. Figure 1 shows the default LaunchPad in its horizontal orientation. Figure 2 shows the same LaunchPad in its vertical orientation. The selection of the default horizontal LaunchPad versus the optional vertical LaunchPad is controlled with one of the radio buttons on page one of the Settings Notebook for the LaunchPad.

Figures 3 and 4 show the options that can be selected for the LaunchPad. For those of you who have not had a chance to use the OS/2 Warp LaunchPad, the bars above (in horizontal format) or to the right (in vertical format) of the first two icons on the LaunchPad are called drawers. A single click on the drawer bar causes the drawer to pop open. Any additional objects that have been positioned in the drawer can be launched with a single click.

Each object in the LaunchPad is a shadow of another object on the Desktop or one that resides within one of the folders subordinate to the Desktop. To add an object to the LaunchPad, simply right-button drag any object and drop it on the LaunchPad or on one of its

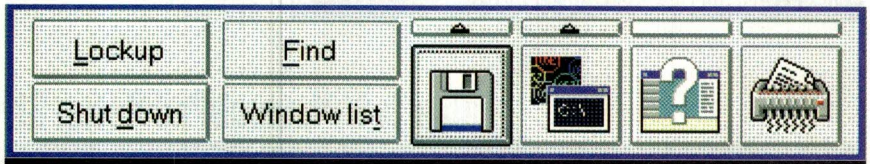

Figure 1: Default LaunchPad, horizontal orientation.

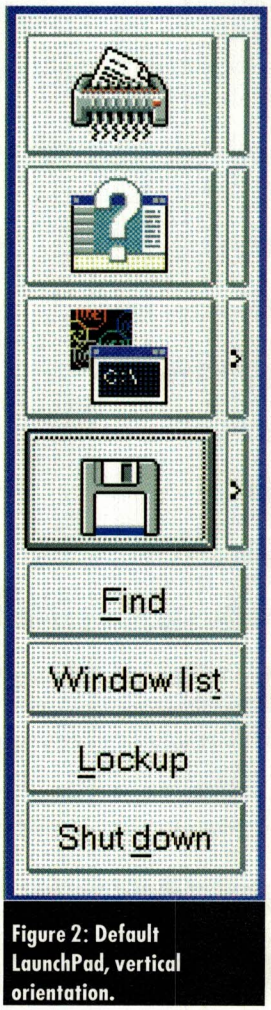

Figure 2: Default LaunchPad, vertical orientation.

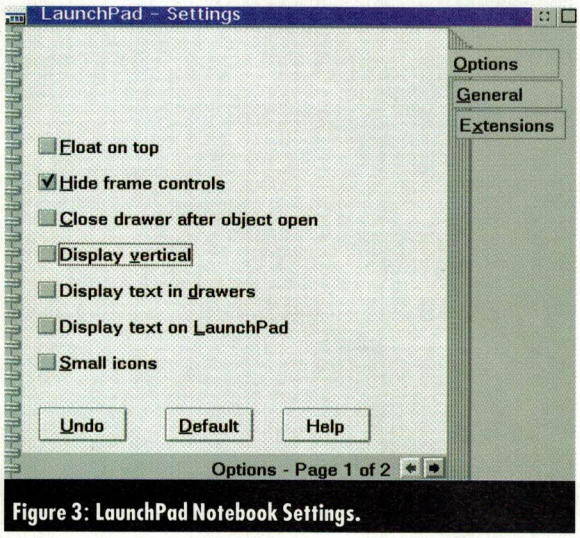

Figure 3: LaunchPad Notebook Settings.

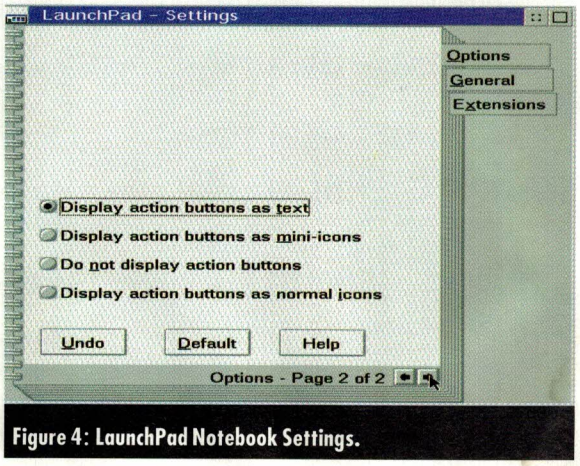

Figure 4: LaunchPad Notebook Settings.

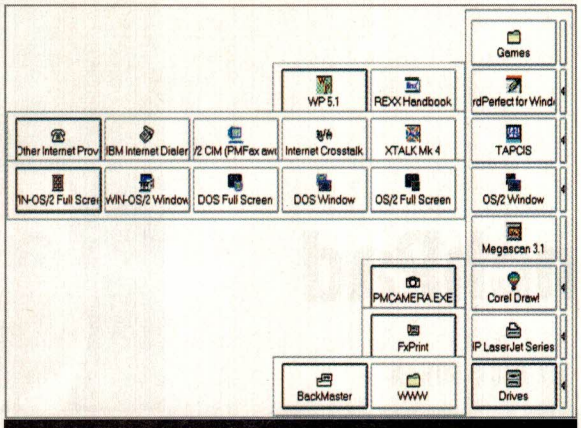

Figure 5: LaunchPad Created with *9506ls01.cmd*.

drawers. When you want to drop an object between two other objects on the LaunchPad face plate (the LaunchPad icons that are not in the drawers), a black bar will appear between the two positions to indicate that you can release the right mouse button. Similarly, adding an object to a drawer is accomplished by dragging an object to the position on the drawer where you want the new object to appear and dropping it when the black bar is in the proper position. Because LaunchPad objects are, by definition, shadows, it is unnecessary to hold <Ctrl+Shift> when you drag an object to the LaunchPad as you would do if you were creating a shadow elsewhere.

You must be wondering, at this point, why I chose to describe the workings of the LaunchPad in a REXX column. The reason is that you can customize your own LaunchPad with a fairly simple REXX program. The LaunchPad class allows setup strings to be used to define the characteristics of the LaunchPad and to allow the LaunchPad to be built with the **SysCreateObject()** function and

Table 1: WPLaunchPad Setup Strings.

WPLaunchPad Key Name	Value	Description
DRAWEROBJECTS	n,object [, ...]	A comma-delimited list, each of which represents a drawer number followed by either object IDs or fully qualified path names. The drawer number (0 = LaunchPad itself, 1 = first drawer, and so on) is separated from the object name with a comma.
FPOBJECTS	<object ID> | filename [, ...]	A comma-delimited list of objects to be added to the end of the LaunchPad. The value(s) for this key name is/are object IDs or fully qualified path names. *Note: This is equivalent to specifying DRAWEROBJECTS with a drawer number of 0.*
LPACTIONSTYLE	TEXT	Display action buttons as text.
	MINI	Display action buttons as small icons.
	NORMAL	Display action buttons as normal-sized icons.
	OFF	Do not display action buttons.
LPCLOSEDRAWER	NO | YES	Specifies whether a drawer should be closed after a LaunchPad object is opened.
LPDRAWERTEXT	NO | YES	Specifies whether object titles should be displayed on the LaunchPad drawers (not buttons).
LPFLOAT	NO | YES	Specifies whether the LaunchPad should float to the top of other windows.
LPHIDECTLS	YES | NO	Specifies whether the LaunchPad frame controls (for example, title bar and icon) should be hidden.
LPSMALLICONS	NO | YES	Specifies whether small icons or default size icons should be displayed on the LaunchPad.
LPTEXT		NO/YES Specifies whether object titles should be displayed on the LaunchPad buttons (not drawers).
LPVERTICAL	NO | YES	Specifies whether the LaunchPad should be displayed horizontally or vertically.

Listing 1: REXX Program to build your own LaunchPad.

```
/* 9506LS01.CMD (RXLS05.CMD) - Build your own Launchpad                  */
                                                                    /* 0002 */
LaunchPadID = '<WP_LAUNCHPAD>'                                      /* 0003 */
location    = '<WP_OS2SYS>'                                         /* 0004 */
title       = 'LaunchPad'                                           /* 0005 */
class       = 'WPLaunchPad'                                         /* 0006 */
                                                                    /* 0007 */
/*-------------------------*\                                       /* 0008 */
|  Setup LaunchPad string   |                                       /* 0009 */
\*-------------------------*/                                       /* 0010 */
parameters =,                                                       /* 0011 */
  'CCVIEW=NO;'                          ||,                         /* 0012 */
  'HELPPANEL=32253;'                    ||,                         /* 0013 */
  'ICONRESOURCE=74 PMWP.DLL;'           ||,                         /* 0014 */
  'LPACTIONSTYLE=OFF;'                  ||,                         /* 0015 */
  'LPCLOSEDRAWER=YES;'                  ||,                         /* 0016 */
  'LPDRAWERTEXT=YES;'                   ||,                         /* 0017 */
  'LPFLOAT=NO;'                         ||,                         /* 0018 */
  'LPHIDECTLS=YES;'                     ||,                         /* 0019 */
  'LPSMALLICONS=YES;'                   ||,                         /* 0020 */
  'LPTEXT=YES;'                         ||,                         /* 0021 */
  'LPVERTICAL=YES;'                     ||,                         /* 0022 */
  'NOPRINT=YES;'                        ||,                         /* 0023 */
  'FPOBJECTS='                          ||,                         /* 0024 */
```


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Listing 1: Build your own LaunchPad. (cont'd)

```
      '<WP_DRIVES>,'                  /* 01 */  ||,   /* 0025 */
      '<WPPO_HPLaserJ>,'              /* 02 */  ||,   /* 0026 */
      '<Corel_Draw!>,'                /* 03 */  ||,   /* 0027 */
      '<WP_MEGASCAN^3>,'              /* 04 */  ||,   /* 0028 */
      '<WP_OS2WIN>,'                  /* 05 */  ||,   /* 0029 */
      '<TAPCIS>,'                     /* 06 */  ||,   /* 0030 */
      '<WordPerfect_for_Windows>,'    /* 07 */  ||,   /* 0031 */
      '<WP_GAMES>,'                   /* 08 */  ||,   /* 0032 */
      ';'                                       ||,   /* 0033 */
   'OBJECTID=' || LaunchPadID || ';'                  /* 0034 */
                                                      /* 0035 */
call SysCreateObject class,,                          /* 0036 */
   title,,                                            /* 0037 */
   location,,                                         /* 0038 */
   parameters,,                                       /* 0039 */
   'R'                                                /* 0040 */
if RESULT <> 1 then                                   /* 0041 */
   do                                                 /* 0042 */
      say '   Error creating launchpad'               /* 0043 */
      exit                                            /* 0044 */
   end                                                /* 0045 */
                                                      /* 0046 */
/*----------------------*\                            /* 0047 */
|  Setup drawer strings  |                            /* 0048 */
\*----------------------*/                            /* 0049 */
drawer_01 =,                                          /* 0050 */
   'DRAWEROBJECTS=01,'                          ||,   /* 0051 */
      '<BackMaster>,'                           ||,   /* 0052 */
      'L:\WWW,'                                 ||,   /* 0053 */
      ';'                                             /* 0054 */
                                                      /* 0055 */
drawer_02 =,                                          /* 0056 */
   'DRAWEROBJECTS=02,'                          ||,   /* 0057 */
      '<WPPO_FxPrint>,'                         ||,   /* 0058 */
      ';'                                             /* 0059 */
                                                      /* 0060 */
drawer_03 =,                                          /* 0061 */
    'DRAWEROBJECTS=03,'                         ||,   /* 0062 */
      'c:\os2addon\pmcamera.exe,'               ||,   /* 0063 */
      ';'                                             /* 0064 */
                                                      /* 0065 */
drawer_05 =,                                          /* 0066 */
   'DRAWEROBJECTS=05,'                          ||,   /* 0067 */
      '<WP_WINFS>,'                             ||,   /* 0068 */
      '<WP_WIN2WIN>,'                           ||,   /* 0069 */
      '<WP_DOSFS>,'                             ||,   /* 0070 */
      '<WP_DOSWIN>,'                            ||,   /* 0071 */
      '<WP_OS2FS>,'                             ||,   /* 0072 */
      ';'                                             /* 0073 */
                                                      /* 0074 */
drawer_06 =,                                          /* 0075 */
   'DRAWEROBJECTS=06,'                          ||,   /* 0076 */
      '<IAK_SLIPPM>,'                           ||,   /* 0077 */
      '<ADV_DIALER>,'                           ||,   /* 0078 */
      '<WP_OS/2_CIM__>,'                        ||,   /* 0079 */
```

modified with the **SysSetObjectData()** function—both of which are found in REXXUTIL. Table 1, reprinted from the *REXX Reference Summary Handbook*, contains all of the setup string key word/value pairs that are used to build the LaunchPad. The program that is shown in Listing 1 was used to construct the LaunchPad that is shown in Figure 5. This program is available for download from CompuServe in the *OS/2 Magazine* section (Library 2) of the OS2AVEN forum as file *rxls05.cmd* and from my FTP directory, *ftp.netcom. com:/pub/dg/dgoran/9506ls01.cmd.*

Publication space limits my description of the REXX program, however, certain things should be noted. Both the FPOBJECTS objects (lines 0025 to 0032 in Listing 1) and the DRAWEROBJECTS objects (lines 0052 to 0053, 0068 to 0072, and so on) are structured so that the lines are interchangeable. That is, they can be moved around interchangeably between definitions. Although these objects are part of comma-delimited lists, the last object may be followed by a comma, even though it is not necessary (line 0032 is an example).

The LaunchPad is actually built by the CALL instruction to **SysCreateObject()** (lines 0036 to 0040). The 'R' parameter (line 0040) indicates that the LaunchPad should be replaced if it already exists. The drawer objects are added with the calls to **SysSetObjectData()** (lines 0093 to 0098) and the object is made visible with the call to the new Warp function **SysOpenObject()**. A description of the **SysOpenObject()** function appeared in my column in the February 1995 issue (p. 58). The function appears in the on-line REXX information, but the description is an example of the inadequacy of the OS/2 documentation.

While most of the objects that are placed on the LaunchPad face plate and in drawers are designated with the object IDs, line 0053 represents a folder (WWW) that is placed in a drawer with the file-system name of the path to the folder. Line 0063 results in the program PmCamera being added to a drawer in face plate 3 by specifying its full file-system name.

With experimentation, you can customize it to your own needs. Just remember, if you drag and drop objects onto your newly created LaunchPad, be

Listing 1: Build your own LaunchPad. (cont'd)

```
   '<WP_INTERNET^C>,'                          ||,   /* 0080 */
   '<WP_XTALK_^MK_>,'                          ||,   /* 0081 */
    ';'                                              /* 0082 */
                                                     /* 0083 */
drawer_07 =,                                         /* 0084 */
   'DRAWEROBJECTS=07,'                         ||,   /* 0085 */
    '<WP_WP_5.1>,'                             ||,   /* 0086 */
    '<WP_REXX_^HAND>,'                         ||,   /* 0087 */
    ';'                                              /* 0088 */
                                                     /* 0089 */
/*-----------------------------------------*\       /* 0090 */
| Add drawers to LaunchPad & open it on Desktop | /*  0091 */
\*-----------------------------------------*/       /* 0092 */
call SysSetObjectData LaunchpadID, drawer_01         /* 0093 */
call SysSetObjectData LaunchpadID, drawer_02         /* 0094 */
call SysSetObjectData LaunchpadID, drawer_03         /* 0095 */
call SysSetObjectData LaunchpadID, drawer_05         /* 0096 */
call SysSetObjectData LaunchpadID, drawer_06         /* 0097 */
call SysSetObjectData LaunchpadID, drawer_07         /* 0098 */
                                                     /* 0099 */
call SysOpenObject LaunchpadID, 0, 1                 /* 0100 */
exit                                                 /* 0101 */
```

sure to update the program that you used to build it in the first place.

Dick Goran is the author of the REXX Reference Summary Handbook, Third Edition. He has been in the computer industry since 1961 and was in the IBM mainframe systems software development business until 1987. He teaches OS/2 REXX to corporate clients and lectures on OS/2. His free REXX utility programs can be downloaded from OS2DF1, Lib 6 on CompuServe or ftped from ftp.netcom.com: /pub/dg/dgoran. He can be reached via E-mail at 71154.2002@compuserve.com.

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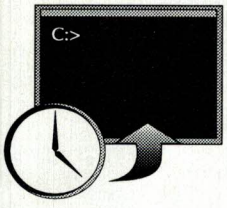

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Getting Set to Net

OS/2 CAN BE YOUR LAN'S ON-RAMP TO THE INTERNET. BY MARK MINASI

Everybody is getting on the Internet these days. We were able to get on with OS/2's help starting about a year ago. I'll be covering OS/2's Internet access in this column for the next couple of months.

The first question people ask about Internet access is: Who runs the Internet? Net vets smile at the question because it has an infuriating answer: Well, uh, nobody, really, and uh, everybody, kind of. The Internet is, in some ways, a stone soup party, or a consortium of people who provide access to the Net, an ever-expanding daisy chain of networks. It's not an exclusive club, however, and anyone can join. Suppose, for example, I wanted to become an Internet service provider... but I guess I'd better define what a service provider is.

To get onto the Internet, you need to be connected to someone who's currently connected to the Internet so that you can piggyback on their connection. That's an Internet service provider. Our provider, a company that works out of Beltsville, Md., is called Digital Express. They have tons of communications equipment that takes information from customers, such as my company, and forwards it to an even larger Internet provider called ANS. ANS forwards the messages directly to anyone I choose to talk to, for example, IBM or 3Com. If the companies I want to communicate with aren't directly connected to ANS, ANS forwards the messages to other Internet service providers who can continue to forward messages, and so on.

Suppose I wanted to become an Internet service provider. How would I do it? I'd start by buying some computers and a bunch of modems. Then, I'd put in some phone lines and let people dial in to my network (for a fee, of course). It sounds like a real money-making scheme, doesn't it? The problem is that I'm only connected to the Internet by Digital Express with a dial-up 14.4 kbps modem. Anyone who would use my Internet connection would have to share their access with other folks. Everyone would be trying to squeeze through that tiny pipeline. Of course, I could get a faster connection to Digital Express, like a leased line, an ISDN connection, or a T1 hookup, but that would cost more money, so I'd have to raise the rates that I charge the folks who were connecting through me. Are you starting to get an idea of how the Internet works?

The first question people ask about Internet access is: Who runs the Internet?

My company has a small Ethernet with 25 workstations. We wanted them to have access to the Internet so that my employees could get Internet mail (you can find me at *mark@smtp-host.mmco.com*), FTP to vendor sites to get patches (we're on *ftp.novell.com* weekly), or get anything else off the Internet.

Internet Access 101

Getting your LAN onto the Internet is simple. First, you need a service provider. Then, get a router (a box that connects your network to the Internet). You can buy dedicated routers, but they cost thousands of dollars. Instead, we use an OS/2 workstation that serves double duty as a desktop PC for one of our researchers. Set up the Internet's protocol, called TCP/IP, on every PC on the network, get the router to dial your service provider, and you'll be set.

To find a service provider, just check out your local computer publications or the business or technology section of your local newspaper. Your router will be a PC that has an Ethernet card (assuming you're using Ethernet) and a modem on it. Don't set up network software on the PC, because you will be installing an IBM OS/2 software product that includes its own network drivers. Just run the self tests and make sure that the thing works before you go any further.

Use the modem to dial up to the service provider, using something called a Serial Line Internet Protocol (SLIP) or Point to Point Protocol (PPP) account. I'll explain how you would use the IBM software, because it's cheap and very good. If you choose this IBM software, you'll have to use the SLIP protocol. Make sure that your Internet provider can give you a SLIP account, because no PPP software comes with the IBM package.

At some point, you'll tell the PC to forward messages between the modem and the Ethernet card by using the SLIP connection and the LAN connection, but I'll get to that later.

Net lingo

Before I go any further, let me define some Net-ese, for example, addresses. Everybody on the Internet has an address that consists of a set of four numbers that are separated by periods (for example, *199.34.57.50*, which is the IP address of one of my servers). Each of the four numbers can range from zero to 255. Together, the four-number address is called the dotted-quad address for the computer. Everyone on the Internet has a unique dotted-quad address. You put the dotted-quad address into a particular computer when you install that computer's TCP/IP protocol stack.

Why TCP/IP? All Internet-connected workstations have to run the TCP/IP protocol. "Protocol" is the word that is used for the method that one computer uses to talk to other computers on the network. For example, one computer might tell another: "the biggest block of data that I'll send to you will be 1,500 bytes" or "when I send you some data, let me know that you got it okay—but if I don't hear from you, I'll wait for 500 milliseconds before I resend it," and so on.

More than one protocol exists, because of the network market. IBM and Microsoft have used a protocol called NetBEUI for years, which has the advantage of being very fast, but not very flexible. It only works on a single segment of network cable and can't talk with PCs on the other side of a modem or a router. The Novell world uses a protocol that is called the Internetwork Packet Exchange/Sequenced Packet Exchange (IPX/SPX). It can communicate over routers and it's fast, but it's also proprietary and LAN-based.

In contrast, TCP/IP (Transmission Control Protocol/Internet protocol) offers a few notable features. First, it can operate over routers. In fact, it was originally optimized to work over wide area networks (WANs). Second, it isn't proprietary; no one owns TCP/IP, because it was built largely with U.S. government grant money. You can find the source code for much of the TCP/IP software that's around—all of which is in the public domain. And, the code has been tested by time. In fact, rumor has it that the reason the allied forces had so much trouble wiping out Iraq's command, communications, and control networks during the gulf war in 1990 was that the Iraqis were using that very same public domain TCP/IP code. It's robust stuff.

Why TCP/IP?

All Internet-connected workstations have to run the TCP/IP protocol.

Anyway, you'll have to replace the IPX/SPX or NetBEUI on your workstations. Or, as is more likely, you won't replace the existing protocols, and will instead supplement them with TCP/IP. That way, your workstations can communicate with your local servers by using the same protocol that they currently use. In addition, you'll be able to talk to the Internet via TCP/IP.

Ethernet versus Internet

I use a mixture of OS/2, Windows NT, and Windows for Workgroups workstations on my network. NT ships with a TCP/IP stack and Windows for Workgroups has a 32-bit TCP/IP stack that Microsoft released last summer. The software you run on your OS/2 workstation depends on what kind of network you're running. We have NT servers, so we use the OS/2 client software for Microsoft networks, which comes with a TCP/IP stack (albeit an old TCP/IP stack).

Because of the broadcast nature of Ethernet message traffic, when any Ethernet card talks, all the cards that are on the same segment "hear" it. Whether or not they choose to listen depends on the address information. Information doesn't need to be routed. A word spoken in a conference room is heard by everyone without amplification or retransmission. It's the same with Ethernet transmissions; they get heard by all devices that are on the segment.

In contrast, Ethernet cards on the other side of a router will not hear Ethernet transmissions from a far segment unless the router explicitly retransmits the data. In the Internet, each piece of IP software must communicate via a router. So, if I try to communicate via Internet to *ftp.3com.com* (a place where you can find drivers for 3Com boards), that communication must be routed from my LAN to the rest of the Internet. That's why you need a router and some routing software.

My router is a 486 that runs OS/2 2.11 (2.11 instead of OS/2 Warp, because when I set it up originally, it worked and I didn't see any need for the upgrade. IBM, however, tells me that the software works fine under OS/2 Warp as well) and IBM's TCP/IP version 2.0 for OS/2: Base Kit. By the way, Internet software comes with OS/2 Warp, but it won't do the routing from a LAN to the Internet the way I've described it here. You'll need to buy the IBM software to do that, which is priced at $150.

When you call your service provider, tell them that you want a "C class Internet domain." That will allow you to put as many as 252 computers on your network and attach that network to the Internet. The provider will give you an address. Ours is *199.34.57.x*. I write it with the "x" at the end because I can fill in the "x" with almost any number I choose, but I don't dare to mess with the 199.34.57 part. The provider will also tell you the address of your default router, the address that it wants you to send your packets of data to, and the address of your nearest DNS server—another essential part of getting wired. You will also have the dotted-quad addresses. Digital Express told me to use addresses *164.109.201.3* and *164.109.1.3*, respectively. You'll also need to know the phone number to dial when making the SLIP connection and the account number and password to get into your provider's network.

Next month, we'll install the router software.

Mark Minasi has been a consultant and educator in the fields of advanced PC operating platforms and PC technology since 1984. He is a contributing editor for Compute, BYTE, and OS/2 Magazine. You can contact him at CompuServe 71571,264 or Internet mark@smtphost.mmco.com.

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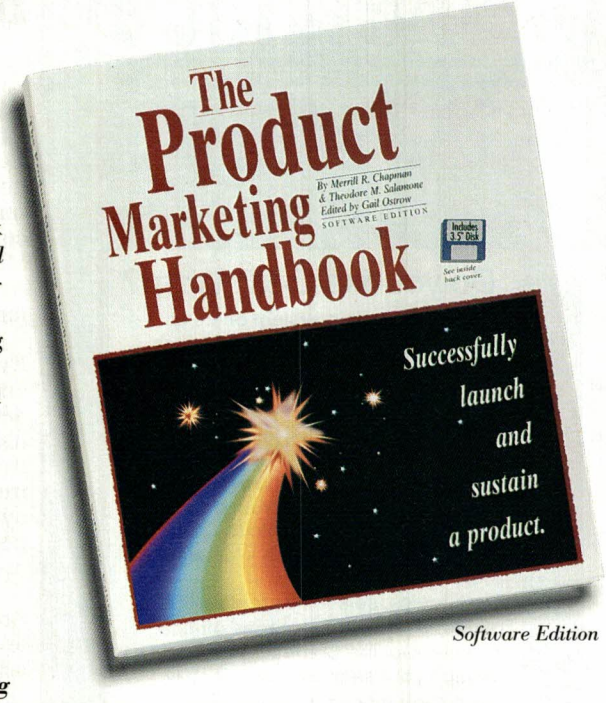
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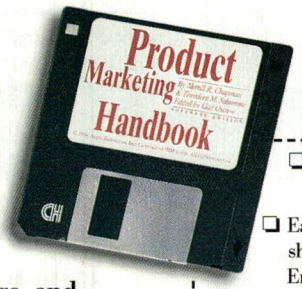

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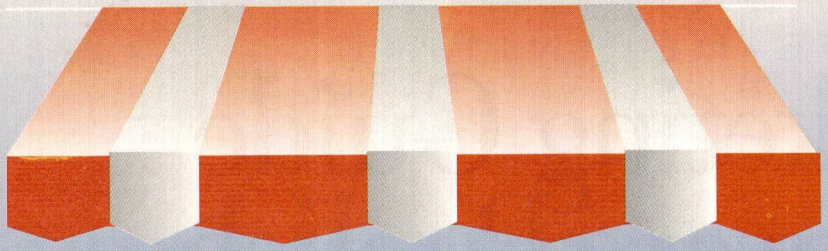

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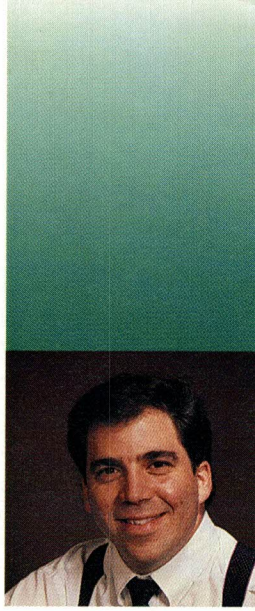

More System Trapdoors

CUSTOMIZE YOUR <ALT+F1> AND LIBPATH, DE-HELP YOUR PROMPT, AND GET RID OF THAT OS/2 LOGO. BY DAVID REICH

ARCHIVING OPTIONS

Q: It's nice to see that OS/2 finally has a way to archive different desktops, allowing you to save them for retrieval later. Can I save other files with the same process? I have several LAN configurations and would like to archive my LAN *.ini* files and other files of my own.

A: It just so happens that you can find a file in the *\os2\archives* subdirectory of your boot drive that can be modified for this purpose. The name of this file is *os2.key*. It contains the names of all of the files that are archived (in addition to the *\desktop* directory structure) when you select to select the archive option in your Desktop Settings. The file contains a default list of files that are the critical system files, such as *config.sys*. By using the same format, you can add your own. The format of the lines in the file are:

```
KEYFILE:C:\CONFIG.SYS
KEYFILE:C:\STARTUP.CMD
```

and so on. **KEYFILE:** is the operational keyword that is followed by the path and file name to be archived. So, for example, if you wanted to save the *ibmlan.ini* file, you would add:

```
KEYFILE:C:\IBMLAN\IBMLAN.INI
```

to the bottom of the file. This file will be archived with the others and can be restored when you need it.

EXTENDING LIBPATH

Q: For the longest time, I have had problems with the limit of the LIBPATH statement and the fact that you can't change it in any way other than rebooting. Can you suggest how I can optimize my LIBPATH statement?

A: Your question is one that OS/2 users have asked for some time, dating back to the 16-bit releases. IBM has come through with a flexible solution that doesn't require any changes in your applications: a dynamically modifiable **LIBPATH**.

When you look in the *config.sys* file, you will see the **LIBPATH** statement as we have come to know and love it. What you don't see are the two statements that allow you to append and prepend to the **LIBPATH**.

The **BEGINLIBPATH** and **ENDLIBPATH** statements were introduced in OS/2 Warp. You might infer that **BEGINLIBPATH** prepends to the **LIBPATH** and **ENDLIBPATH** appends to it. Let's take a look at how you can use these statements in ways that might not be obvious.

First, you should know that the limit on the **LIBPATH** statement is 1,024 characters—not the 256 that most people think it is. The main reason is that most text editors can't handle lines that are more than 256 characters in length, thereby effectively limiting the **LIBPATH** to 256 characters. Assuming that you have an editor that allows it, your standard **LIBPATH** statement can be as long as 1,024 characters.

In addition to the increase in length, IBM introduced the ".;" in the **LIBPATH** as a default with OS/2 2.0. Although the ".;" worked in previous OS/2 versions, the OS/2 2.0 installation program included it in the default *config.sys*. The "." refers to the current directory. It used to be that when any program went to load a DLL without a specific location, the first place it searched was the current directory, because "." refers to the current directory in the file system. This ability presented some level of flexibility, but users wanted more.

IBM decided to create a way to dynamically add or remove directories from the **LIBPATH** instead of changing the convention that has been with OS/2 since version 1.0. The most obvious way to use this feature is to type the line in Fragment 1 to prepend the **LIBPATH** with the specified directories for that particular session:

Fragment 1:

```
SET BEGINLIBPATH=x:\wherevr;y:\another\dir;
```

Note that, when you use this method, the change occurs for that single session only. When you close that session, the changes disappear. The same is true for the SET **ENDLIBPATH** statement. The **LIBPATH** is searched for DLLs from front to back, so you can strategically place things in

the **LIBPATH**, **BEGINLIBPATH** and **ENDLIBPATH**, so that they are found in that particular order. To remove an entry, just type the following line to erase the current **BEGINLIBPATH** string:

```
SET BEGINLIBPATH=
```

The same is true for **ENDLIBPATH**. If you have several directories in either of these strings and you want to remove only one, you must retype all of the entries, leaving out the directory you want to remove.

We'll move on to some options that can make this functional enhancement interesting. First, you cannot change the **LIBPATH** that is specified in *config.sys* no matter what you do. You can use the prepend and append functions to change the path search order, which facilitates putting new or replacement DLLs with the same names as those in the **LIBPATH** in other directories. You can, however, also use the **BEGINLIBPATH** and **ENDLIBPATH** statements to create a completely dynamic DLL search path.

You will start by putting the entire string of directories that are currently in the **LIBPATH** in *config.sys* into a line in *config.sys* that starts with the following line:

```
SET BEGINLIBPATH=
```

You are setting the **BEGINLIBPATH** environment variable in *config.sys* so that it is set for all sessions—not only those that you have typed it into. Now that you have the whole "real" **LIBPATH** where you want it, delete the **LIBPATH** line from *config.sys*. Now, when you reboot, your entire **LIBPATH** is in the **BEGINLIBPATH** environment variable and you can modify it as you like at any time on a per-session basis. You could, however, choose to use the **ENDLIBPATH** variable instead. The choice is yours.

ANOTHER SECRET KEY

Q: Recently, you wrote about secret keys (March 1995, p. 67), such as the <Alt+F1> and the scrolling names list. I found those keys very helpful. Do any others exist?

A: I'll give you another: the <Alt+F2> key sequence. When you first start your system and the power-on self test completes (and/or when you acknowledge the Boot Manager menu) and you see a small white block with "OS/2" next to it in the upper-left corner of the screen, press <Alt+F2>.

The <Alt+F2> key sequence causes all of the device-driver load messages to appear and scroll on the screen. The OS/2 developers changed the default behavior of the system several releases ago so that not all of the device-driver status messages are displayed. The only time the logo screen disappears is when a device driver displays a message or when the Workplace Shell desktop is about to paint itself. The device drivers that were shipped with OS/2 do not write any messages to the screen unless an error occurs.

<Alt+F2> overrides this behavior and tells the device drivers to display status messages as they load. This ability is useful if you have problems with your device drivers and you want to see that they are loading properly or if you're just curious and want to see what's going on. No change in system function occurs when you use <Alt+F2>. It just changes what you see on the screen.

REMOVING HELP

Q: Whenever I use a DOS or OS/2 command-prompt session, I have a line that stays on the top of the screen or window that tells me how to get help and how to get the Window List. I already know how to do these things and would like to get rid of the line. Do you have any suggestions?

A: To remove that line, simply type the following:

```
HELP OFF <enter>
```

MINIMIZE ON START

Q: You wrote about programs that can be started minimized (November 1994, p. 69). I tried to set up some of my programs according to your suggestions, but I can't select the Start Minimized option. Am I doing something wrong?

A: No, you're not. As you know, OS/2 runs a wide variety of programs that range from the DOS and Windows programs to the full-functioned Presentation Manager programs and all of the programs in between. Some programs need OS/2 to tell the "host" session (such as a DOS window) how to run the program. You can set it up by setting up the Workplace Shell program reference object.

Presentation Manager programs know that they're running in a window and tend to ignore start parameters, such as minimize on start, because they open with their own settings and window sizes anyway. When the Settings Notebook looks at the program-executable file that you specify in the program-reference object and sees that it is a PM program, it grays out the Minimize on Start option as well as some others. You really can't have a PM program minimize on start unless it provides that function for you.

DETAILING DRIVES

Q: I'm interested in configuring my drives icons so that, when I click on a drive icon (for example, the *c:* drive), the drive tree is displayed as a folder tree (which, I believe, is the default). Then, when I click open any one (or more) of the directory folders, I want them to always open in the Detail view—not the icon view (which also seems to be the out-of-the-box default). I know that I can pre-configure the drive icon so that it opens up as a tree, but how do I tell OS/2 to always open any of the folders in Detail view? I can manually configure each folder, but I have access to literally hundreds

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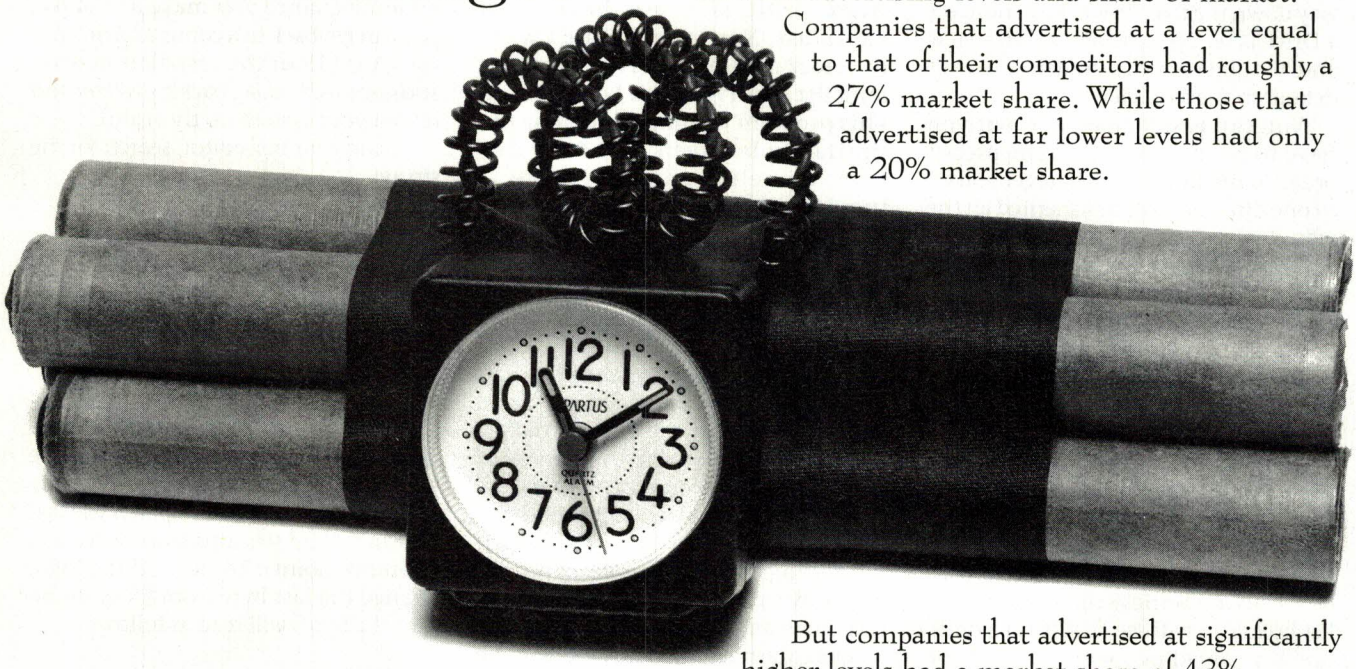

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of directories and subdirectories on my workstation and server volumes, so converting each one individually would be very time consuming and not very dynamic. Do you have any ideas?

A: You can use object-oriented inheritance to complete this process with a minimum amount of work. This solution will not work with versions of OS/2 prior to OS/2 Warp due to a problem in the Drives object in the Workplace Shell, but you can use it as long as you are running OS/2 Warp. When you change a setting, it is inherited all the way down the tree. As you have noticed, a Drive is set up to default to Tree view and all subdirectories (folders) below it default to the icon view.

You can easily change it, but you have to be sure to do it in the proper order. Remember that whatever you do to one directory will be inherited all the way down the tree. Just change the Settings to default to Details view for each subdirectory (folder) that is immediately in the root of a drive and all subdirectories under that will inherit the behavior. First, I'll tell you how to do it. Then, I'll explain why the order is important.

To make Details the default view for a folder, open the Settings Notebook for the folder with a right-click on the object and select Settings. Click on the menu tab and select Open in the top list box. Click on Settings right next to that list box. You will see that it is a conditionally cascading menu and that the default action is Icon view. Click on the down arrow on the right side of that entry field (actually it is a drop-down list field) and select Details View. Now, select OK and close the menu windows and the Settings Notebook. The default action for when that folder and all folders underneath it open will be changed (because of the inheritance).

Why do you need to change the default action for all of the folders that reside in the root of a drive? Why not just change the default for the drive once and when all the others inherit the behavior, just change the root back to what it was before? Because, if you change the root to default to Details on open, even though all of the folders below it will inherit the behavior, when you change the root's behavior back to Tree view, all of the folders below it will also inherit that behavior!

So, while you don't have to change the Settings of all of your subfolders, you will have to change the (hopefully) few that live in the root of the drive.

DELETING PRINTER DRIVERS

Q: How can I delete printer drivers that were installed for use with attached or networked printers? I have installed several drivers that I no longer need, because the network printers I use have been upgraded. Now, every time I want to select a printer driver, I have a long list of drivers that I don't need. This problem is compounded by the similarity between IBM 4039 drivers. Somehow, in my haste, I inevitably pick the wrong one. Being able to delete the drivers I don't need would help. Is a printer-driver management tool available, or does OS/2 provide a way to do it?

A: Some things are easier to do than they might appear. Printer drivers can be deleted the same way they are installed. The first thing you want to make sure of is that the drivers you want to delete are not hooked to any active printer port. Once you're sure of that, simply open the Settings Notebook for any printer object by right-clicking to get the context menu and selecting Settings.

Once the notebook is up, click on the Printer Driver tab to bring up that page. Now, right-click on one of the drivers that you want to delete. You will see a Delete option on the menu. Click on that option, and follow the bouncing ball. You will be able to delete any printer drivers that aren't hooked up.

REMOVING THE LOGO

Q: How can I remove the logo screen that comes up when I boot my system?

A: To remove the OS/2 logo that displays when you boot your system, you have to patch the OS/2 kernel file, *os2krnl*. This procedure is not for the novice or the faint of heart. You will need to use a hexadecimal editor.

First, remove the hidden attributes on the kernel file with the **ATTRIB** command. While you are in the root directory of the boot drive, type the line shown in Fragment 2.

Fragment 2:

```
ATTRIB -h -s -a -r OS2KRNL <enter>
```

Make a backup copy of the file. I usually call the backup *os2krnl.org* (for original). You can patch the kernel and, if by some chance you make a mistake, you can get back to a command prompt via <Alt+F1> or the installation disks and copy *os2krnl.org* back to *os2krnl* and reboot your system (to try again).

Using your hex editor, search for the string:

```
33 C0 B4 1A FF
```

Once you have found it, you need to look a little further to find the bytes that will look like the following line:

```
33 C0 B4 1A FF 1E ?? ?? 3C 1A 0F 85
```

(I put the "??" in to indicate that these bytes can vary from system to system.)

You will only need to patch the last byte in this list (the others are listed as a reference point). To turn off the logo, change the last byte from 85 to 84, so that the bytes will read as follows:

```
33 C0 B4 1A FF 1E ?? ?? 3C 1A 0F 84
```

Save the file and reboot your system.

You should note that when you are making this change, if the bytes don't match the ones above exactly, don't patch the kernel. In addition, you should note that the IBM copyright will display even if the logo does not.

David Reich, a contributing editor to OS/2 Magazine and author of Designing High-Performance OS/2 Warp Applications has been with the OS/2 development team since 1987. David is interested in your questions and suggestions. Contact him at CompuServe 76711,632 or Internet speedracer@vnet.ibm.com.

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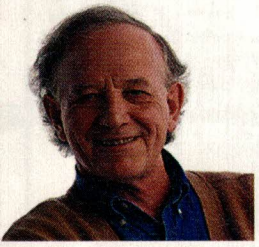

Dumbth Rules OK?

OS/2 WARP FOR DUMMIES

BY STAN KELLY-BOOTLE

My critical spotlight this month is focused on Andy Rathbone's *OS/2 Warp for Dummies, 2nd Edition* (IDG Books), an update of his *OS/2 for Dummies*. But first, some general comments on IDG's ever-growing "Dummies" series. My *Books for the Baffled* campaign here and in *UNIX Review* against this "x for Dummies" template has, alas, done little to stem the flood. Ignoring catchy alternatives, such as *Visual BASIC for the Blind, MIDI for the Deaf, PERL for Swine, C++ for the Nonplussed, SQL for the Squalid*, and *Pacsal for the Dyxlesic*, IDG's wooing of the disadvantaged waxeth unchecked. Now, more than 12 million IDG low-self-esteem books are in circulation, and one fears that IDG may be tempted into non-computer markets with *Brain Surgery for Dummies* and the like. I have this image of surreptitious shoppers whispering at the counter "Do you have... er... *Quantum Chromodynamics for...*er...*Dummies?*" and creeping out with the book in a plain wrapper. Of course, this ploy can backfire. I recall asking *sotto voce* for Grecian Formula at a crowded pharmacy counter, only to have the pharmacist shout across the shop: "Joe, this guy needs some Grecian Formula!"

Throughout 1994, *Dummies* titles have occupied the top three places in the monthly Computer Publishing Update (CPU) HotList. *Windows 3.1 for Dummies*, also by Andy Rathbone, is now number one, pushing Dan Gookin's pioneering *DOS for Dummies* into second place. Not surprisingly, *Internet for Dummies* by John Levine and Carol Baroudi has rushed into third place.

To protect IDG's valuable gimmick, each of the Dummies titles sports a dubious (tm). Legal expert, Glenn Groenewold tells me that, in general, titles *qua* titles cannot be trademarked or copyrighted. What seems to be protectable is the uniform look'n'feel of the *Dummies* series: the distinctive yellow cover, logo, and artwork. Even so, MIT Press was persuaded to change one of their titles from *Big Dummy's Guide to the Internet* to *Everybody's Guide to the Internet* although their 1994 catalog had already appeared with the offending title. I rather like the Chomskian deep transformation from "big dummy" to "everybody."

Publishers, such as Alpha, have jumped on the low-self-esteem bandwagon with *The Complete Idiot's Guide to x*. To date, these titles have not fared as well as IDG's, so perhaps Alpha has taken the dumbing down a little *too* far. The secret of IDG's success must lie beyond the Dummies title. The fact is that the contents of the *Dummies* books, although varying greatly in quality and level of exposition from title to title, have attracted the huge readership that is easily frightened by large doses of jargon served up with unleavened nerdiness.

With this in mind, and shedding my hard-gained elitism, I see *OS/2 Warp for Dummies* as ideal for its target audience. The book is attractively priced at $19.99 and reflects the easy-going avoid-the-technicalities expository skills that put Rathbone's *Windows 3.1 for Dummies* at the top of the charts. If an OS/2 book ever makes the top ten (or even the top 50), this book is most likely to do it.

I personally have trouble with many of Rathbone's stylistic mannerisms, some of which flirt close to a Wayne's World of slapstick. You'll find sentences such as "Yuck!" and "Double Yuck!" and a general thesis that *all* technical terms are arcane buzzwords and impenetrable jargon that are confined to nerds and gurus. The "rest of us" can get by with "plain old English," so don't even try to memorize the words "metafile" or "dynamic link library."

On the other hand, the book is typographically well-produced with lots of legible screen shots. I tried in vain to find factual errors, coming up with only a few minor quiddities. The opening "Cheat Sheet" of OS/2 essentials refers to "left" and "right" mouse buttons. Not until page 142 do you learn that "button 1" and "button 2" are the official designations. Also, several references to Win-OS have survived unedited from the pre-Warp *OS/2 for Dummies*. Overall, the first edition has been "well Warped" with a crisp introduction to the BonusPak.

RESOURCE:

***OS/2 Warp for Dummies* ($19.99)**
by Andy Rathbone
IDG Books, Foster City, Calif.

Stan Kelly-Bootle started computing on EDSAC I at Cambridge over 40 years ago and has written at least 11 books, the latest being The Computer Contradictionary *from the MIT Press. His "Devil's Advocate" column in UNIX Review has been running since 1984. He welcomes e-mail via CompuServe 70323,1560 or Internet skb@crl.com.*

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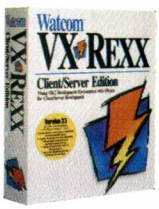

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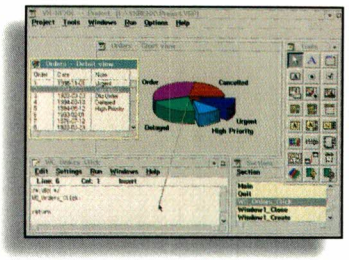

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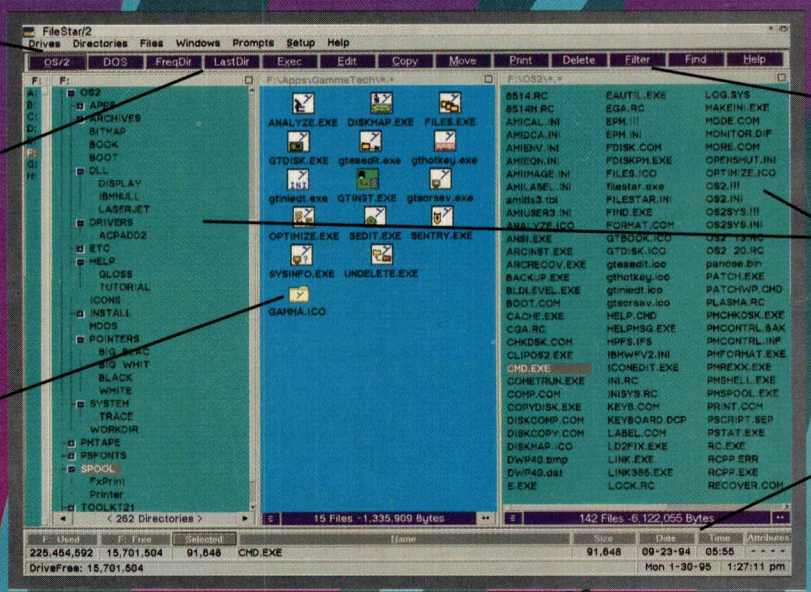

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- Continuously monitor the size of the swap file, amount of available memory, and free space.
- Perform file operations effortlessly.
- Compression utilities allow you to quickly compress/decompress files and directories and browse the contents.

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